Healthy People Living in Healthy Communities

State of the Health and Environment of South Carolina

SC DHEC 2005

MESSAGE FROM THE COMMISSIONER

As I look back on 2004, I am struck by a well-known cliché about life. The more things change, the more they stay the same.

I believe the examples you will read about on the following pages will illustrate and help you understand why I mention this cliché.

One example: childhood immunizations. In recent years, South Carolina found itself skyrocketing from the bottom of the state-by-state comparison of childhood immunization rates to the coveted number one spot. And since that time, we've consistently maintained a level that keeps us among the top five states in the country. In 2003, the last year for which data is available at this publication date, we found ourselves at number three.

And yet, as we reflect upon the success of this important public health program, we find ourselves faced with new challenges in public health we couldn't have imagined just one generation ago, including a growing epidemic of obesity and its related health problems, a national shortage and rationing of flu vaccines, an astounding number of hurricanes that tore through the southeastern United States, and continued preparations as part of the country's public health preparedness and bioterrorism programs.

The more things change, the more they stay the same.

For every success, there is a new challenge. And each time, our state is judged by its relativity to other states, never taking into account issues such as socioeconomic status of citizens, access to care, educational levels, cultural influences on the population base, and a host of other factors that make those comparisons somewhat like comparing apples to oranges. Which is one reason we take such pride in accomplishments like those of our childhood immunization program…or our Brownfields initiatives…or our CHAPS accreditation…or our Early Action Compacts to improve air quality. But we cannot rest on our successes.

So, how have we tried to approach these new challenges in the last year? By looking at the glass half full, rather than half empty…by realizing that this is the nature of public health and environmental protection…and by understanding that the only way we will make great strides in protecting the health of our people is by working together through partnerships with service providers, the regulated communities, nonprofit and advocacy groups, policy-makers, elected officials, sister states, other state agencies, federal agencies, and the public at large. Only then will we be truly able to improve the health of all South Carolinians.

And that, after all, is the overarching goal we all share. We don't regulate hospitals and nursing homes for the sake of regulating. We don't regulate air emissions and liquid discharges from industries for the sake of the industries. We regulate our environment in order to protect human health. We do what we do to ensure that the generation that will come after us will live in a cleaner environment, be healthier and have a greater life expectancy than we do.

May all of us remain focused on what each of us can do to help in this endeavor. Our parents and their parents before them did so for us. In fact, since the early 1900s, the greatest strides in public health improvement have been made through environmental improvements and regulations. Let us never forget what their efforts have done to improve health outcomes for each of us. And let us never fall short of the commitment and effort that they showed.

Did we hold fast to that commitment and effort in 2004?

I believe we did.

But there is still much to be done in 2005 and all the years to follow. Because the more things change, the more they really do stay the same.

C. Earl Hunter

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About This Book

The title of this book reflects the S.C. Department of Health and Environmental Control's vision for the future of South Carolina, healthy people living in healthy communities. The long-term goals from the agency's Strategic Plan are defined and addressed within each broad chapter subject. The goals reflect our role as the state's public health and environmental agency in carrying out the three core functions of public health: assessment, policy development and assurance. The goals also build on national efforts in public health such as Healthy People 2010. These goals are statements of long-term changes that will move us toward our vision. For more information on Healthy People 2010, see page 69. Unless otherwise noted, data presented in this report represents calendar year 2003, the most current year available. Program activities described are typically for calendar year 2004. A general appendix with more detailed data begins on page 62.

Para información en español, comuníquese con su departamento de salud local (vea pagina 78).

SC DHEC WHO WE ARE

The S.C. Department of Health and Environmental Control touches the life of every South Carolinian every day. From making sure that drinking water is clean to assuring immunizations are provided to the most vulnerable populations, the approximately 4,700 full-time employees and about 700 additional hourly/temporary employees provide services through state, district and county offices.

The General Assembly created DHEC in 1973 when it reunited the State Board of Health (created in 1878) and the Pollution Control Authority. The agency's mission is to promote and protect the health of the public and the environment. The agency is under the supervision of the Board of Health and Environmental Control, which has seven members, one from each congressional district and one at large. The governor, with the advice and consent of the Senate, appoints members.

Besides our offices in Columbia, DHEC operates health and environmental district offices as well as local health departments and clinics to ensure that the many programs and services we provide will meet the needs of local areas. Our services fall under four general areas: Health Services, Health Regulations, Environmental Quality Control and Ocean and Coastal Resource Management.

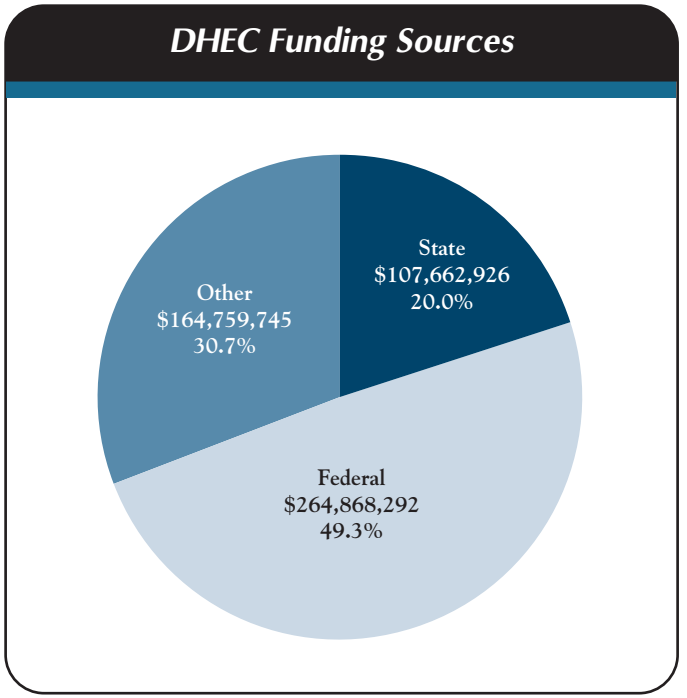
Health Services includes activities to prevent chronic and infectious diseases; promote healthy mothers, babies and families; improve and assure environmental health in areas such as restaurant sanitation, septic tanks and mosquito control; perform laboratory analyses for infectious diseases and newborn screening; encourage the reduction of health disparities; and support seniors with in-home health care needs.

Health Regulations oversees the development of a State Health Plan to address the need for medical facilities and services; licenses, certifies and inspects health care facilities; regulates, licenses and inspects sources of electronically produced radiation (X-rays); and oversees entities that provide emergency medical services in the state.

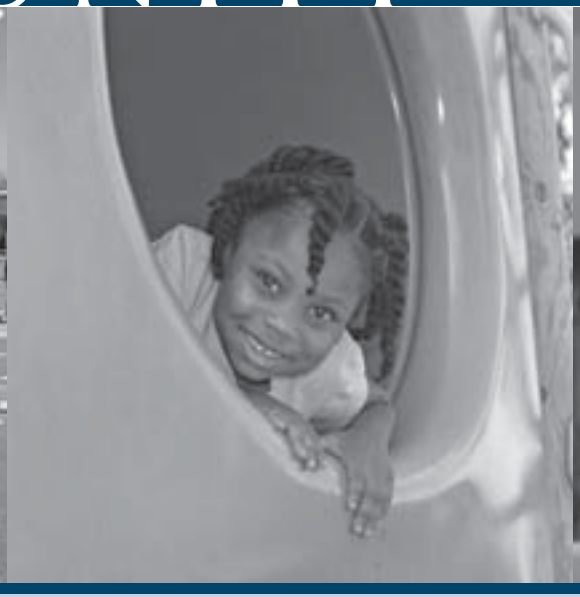
Environmental Quality Control enforces federal and state environmental laws and regulations; issues permits, licenses and certifications for activities that might affect the environment; responds to complaints on environmental activities; inspects permitted entities; responds to environmental emergencies; and conducts environmental education and outreach activities.

Ocean and Coastal Resource Management enforces the S.C. Coastal Zone Management Act to protect coastal resources and promote responsible development through permitting and certification programs in the eight coastal counties.

DHEC's total budget for fiscal year 2004-2005, including state, federal and other funds, was $537,290,963.



CHAPTER 1
COMMUNITY



Increase Local Capacity to Promote and Protect Healthy Communities

What is a Healthy Community? • State Cardiovascular Plan
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Ongoing Challenges, New Approaches

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Realizing the vision of healthy people living in healthy communities is possible only if the community, in its full cultural, social and economic diversity, is an authentic partner in changing conditions for health. Public health has improved community health over the years through measures such as controlling epidemic diseases, immunizing vulnerable populations and overseeing safe food and water practices. These are still important public health functions, but are now joined by an awareness of the environment's impact on individual health. Clean drinking water, air that is safe to breathe, land that is free of contaminants – these are all necessary to good health and have become particular challenges to protect and assure as our state grows. A new role of a public health agency is to help communities recognize how interconnected their total environment is to their health and to empower and assist communities in making decisions that are sustainable as they grow.

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GOAL
Increase Local Capacity to Promote and Protect Healthy Communities

What is a Healthy Community?

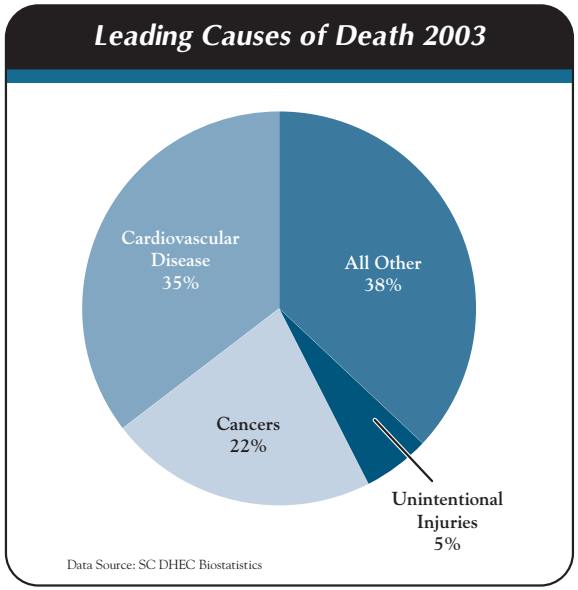
A "community" is a group of people with a common interest. Members of communities typically live or work in the same location or environment and so are influenced by the same social, economic and physical risk factors. A healthy community embraces the belief that health is more than merely an absence of disease; it includes those elements that enable people to maintain a high quality of life and productivity. Individual behaviors, physical environments and social environments play major roles in the health of individuals and communities.

To achieve healthier communities, DHEC forges community collaborations and **partnerships** built on the conviction that, while retaining uniqueness and autonomy, organizations, agencies and community members with shared values and goals can accomplish more by working together than they can on their own. A variety of vehicles are used for community collaborations, including coalitions, partnerships, interagency agreements, community advisory boards and task forces. The ingredients for a successful collaboration include shared vision and goals; skilled leadership; process orientation; cultural diversity; member-driven agenda; multisector involvement; and accountability.

Partnership Launches State Cardiovascular Plan

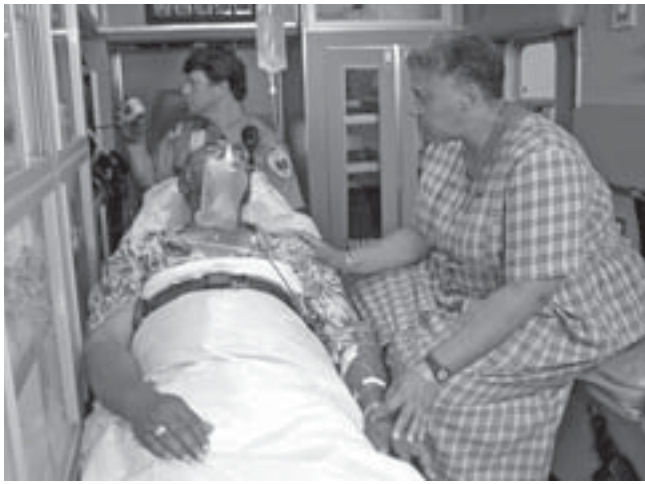
To address the leading cause of death and disability in South Carolina, DHEC staff and its partners in 2004 continued developing and sustaining key partnerships and identifying effective strategies and activities to reduce cardiovascular disease in the state. Statewide partners, including the American Heart Association, launched the Cardiovascular Health State Plan in September 2003 to address the disease across the spectrum, from promoting healthy lifestyle choices to evidence-based best practices for health care practitioners. Anyone can use the plan to find desired outcomes and action steps to make their community a healthier place to live.

http://www.scdhec.gov/cvh



Some 2004 activities include:

- Emergency Management of Acute Stroke Training for Emergency Management Services: The S.C. Emergency Medical Service (EMS) Network provided Miami Emergency Neurological Deficit training during the annual S.C. EMS Symposium and coordinates additional stroke trainings out of the network's four regional offices.



- Minigrants to Federally Qualified Health Centers: Six Federally Qualified Health Centers received funds to develop or enhance clinical patient information systems to provide standardized care to patients with cardiovascular disease.

- Grants to DHEC health districts: Four districts conducted community-level projects to address heart disease and stroke prevention, treatment and awareness.

- Medical University of South Carolina (MUSC) Hypertension Initiative/American Society of Hypertension Specialists: The alliance provided training to health care providers on the most recent guidelines and practices for identifying and treating patients with high blood pressure and cholesterol. Patient data is collected and analyzed to identify opportunities for quality improvement in clinical outcomes.

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- Work Site Wellness Initiative: A contract with the state Office of Research and Statistics will allow medical claims data to be linked to behavioral interventions within targeted work site wellness programs in the Columbia area.

- Media campaign: A statewide multimedia (TV, radio, print) effort to communicate messages about the importance of recognizing and responding to signs and symptoms of stroke was developed.

For information on racial disparities in cardiovascular health, see page 24. For information on cardiovascular health in the senior population, see page 40.

- www.scdhec.gov/cvh
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Work Launched on State Overweight, Obesity Problem

The rates of **overweight** and **obesity** in South Carolina are among the highest in the nation. Medical expenditures related to obesity in South Carolina topped $1 billion in 2003. Obesity is fast approaching smoking as the leading cause of preventable deaths in the United States, according to the Centers for Disease Control and Prevention (CDC).

To address this serious public health problem, the S.C. Coalition for Obesity Prevention Efforts began meeting in 2004. Four main work groups (Business and Industry, Community and Faith, Health Care Systems, and Schools) will develop strategies toward obesity reduction. The work groups have drafted objectives and activities to support the coalition's main goals. The plan is expected to be complete in June 2005.

DHEC also develops, coordinates and implements science-based nutrition and physical activity approaches in partnership with public and private leaders in obesity and chronic disease prevention. Strategies, particularly focusing on policy and environmental change, address evidence-based behaviors for obesity prevention. Strategies target schools, communities, worksites, faith-based organizations and health care settings. For information on racial disparities in obesity, see page 30.

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Diabetes Initiative Grows

The S.C. Diabetes Prevention and Control Program (DPCP) receives funding from CDC to promote awareness, prevention and management of diabetes, the sixth leading cause of death in South Carolina. The program places an emphasis on reducing health disparities among high-risk populations. The work plan is based on the CDC's National Objectives, which focus on surveillance; clinical measures (foot and eye exams, influenza and pneumonia vaccinations, and hemoglobin A1c tests); and establishing links to programs addressing risk factors for diabetes.

Key program activities in 2004 to address the disease include:

- Annual evidence-based workshop/training: S.C. DPCP, in partnership with DHEC, MUSC and the Diabetes Initiative of South Carolina, conducted and continues to conduct trainings for providers across the state based on recommended standards of care.

- Annual African-American Conference on Diabetes: This conference is held every November in observance of National Diabetes Awareness Month. The conference targets people living with diabetes, their caretakers, health care professionals and other interested community members. Average attendance the past several years has been around 1,000 participants. Each year concurrent sessions are held on foot and eye care, nutrition, physical activity, depression, medication and monitoring, diabetes and sexuality and other topics.

- Community health center technical assistance: S.C. DPCP Health Systems technical assistance is focused on seven of the nine centers that are part of the Diabetes Collaborative and are using the Chronic Disease Model. Technical assistance is provided to improve diabetes care in office-based practices in medically underserved areas of the state and to increase diabetes self-management skills in patients. Priority populations are African-Americans, the elderly and uninsured and underinsured. These health systems interventions are done in collaboration with the S.C. Primary Health Care Association.

- Local coalitions: Membership in 27 coalitions across South Carolina includes individuals, health professionals and people living with diabetes. The coalitions provide a forum for local communities to plan and implement diabetes-related activities that are locally driven and controlled, share resources, create awareness, improve communication and solicit corporate support for community projects. Nine community coalitions were funded during 2004-2005 with amounts ranging from $3,000 to $7,000.

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Partnership Addresses York County Air Quality

As a result of DHEC's community partnerships, several projects took place in 2004 to improve air quality in northern South Carolina, particularly the Charlotte/Gastonia/Rock Hill area.

The **Sustainable Environment for Quality of Life** (SEQL) project is funded by a U.S. Environmental Protection Agency (EPA) grant and is led by the Centralina Council of Governments (COG) and the Catawba Regional COG with support from DHEC, the N.C. Department of Environment and Natural Resources and EPA. Government, business and community leaders are called on to address environmental issues that impact the quality of life and economic viability of the Charlotte/Gastonia/Rock Hill region. The project supports the region's efforts to develop integrated and long-term solutions that ensure economic development and a positive quality of life for its future. The SEQL bistate region includes 15 counties, is populated by 2.1 million people, and encompasses more than 100 political jurisdictions.

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Some accomplishments in the Rock Hill region follow:

- Sub-regional meetings were held and all jurisdictions of the Catawba Regional COG signed a Clean Air Policy resolution;
- Model policies, ordinances and procedures were developed to assist local government and elected officials in addressing environmental issues that confront their communities;
- A gas can exchange was held in conjunction with Household Hazardous Materials Collection Day. Old gas cans were turned in and 112 new, environmentally friendly ones were given away; and

- EPA's Design for the Environment auto refinish training was provided to auto body shops in the Rock Hill area. The program encourages best practices that reduce exposure and environmental release of toxic chemicals during spray painting and related activities.

- http://www.seql.org
- http://www.catawbacog.org
- Dianne Minasian: minasids@dhec.sc.gov • (803) 898-4467

Public Health Preparedness Continues Improvement

In 2004, DHEC continued to improve state and community responders' ability to plan for public health emergencies. This planning has improved community-based responses to natural disasters and infectious disease outbreaks as well. A real-time test of DHEC's ability to respond occurred with the flu vaccine shortage in the fall of 2004. DHEC clinics administered approximately 100,000 doses of influenza vaccine to people at high risk for influenza-related complications and distributed approximately 130,000 doses to nursing homes, hospitals, community health centers and other health care providers who found themselves without vaccine because of the shortage. For more on the shortage, see page 13.

Other 2004 activities include:

- Integrated **bioterrorism** planning efforts: DHEC has helped prepare numerous bioterrorism plans to complement the existing State Emergency Operations Plan, including Mass Casualty Response plans for the state and its respective DHEC districts; a Strategic National Stockpile plan for deployment of pharmaceuticals and medical equipment, integrating the Columbia Metropolitan Medical Response System into county and state plans; and a Crisis and Emergency Risk Communication plan to

disseminate urgent public health information through the media. Planning and implementation are under way for the CHEMPACK stockpile of chemical antidotes and the U.S. Postal Service's Biohazard Detection System to detect anthrax in the mail.

- Enhanced rapid disease investigation capabilities: DHEC improved its ability to conduct rapid outbreak investigations at both the state and local level through partnerships with the State Poison Control Center, state veterinarian and Clemson agencies. Full-time disease surveillance/epidemiology leaders and emergency preparedness managers have been placed in each health district, and continued development of the Carolina's Health Electronic Surveillance System will provide for a more secure exchange of disease-reporting information.

- Increased State Public Health Laboratory testing capabilities: DHEC's State Public Health Laboratory increased its bioterrorism and chemical testing capabilities to include online real-time, polymerase chain reaction tests for anthrax, plague, vaccinia and chicken pox in addition to instruments that perform rapid, time-resolved fluorometric tests for biologic agents. The lab now can detect selected chemical weapon agents in human tissue samples.

- Rapid electronic communication: All public health districts have established full-time communications through an automated notification system, which has been used several times to allow state and local public health authorities to communicate with hospitals, health care providers, and other response partners. In partnership with the State Law Enforcement Division

Trauma Care Act Passes Legislature

The Trauma Care Act, introduced by DHEC in partnership with the S.C. Hospital Association, passed unanimously in both the House and Senate in 2004. Despite passage of the act, the infrastructure for the system cannot be established until there is funding to support the system.

Twenty-two hospitals designated as trauma centers voluntarily commit enormous resources to provide specialized care for the injured. But there has been no guarantee that these hospitals would be able to continue to provide these costly resources. In South Carolina, as well as in other parts of the country, trauma centers are closing or downgrading their level of care. Four trauma centers in South Carolina have dropped out of the system or downgraded their level of care during the last several years.

Trauma centers are critical because each year accidental injuries claim the lives of nearly 2,000 South Carolinians, the majority of them children and young adults. For the past decade the state's injured citizens have benefited from a voluntary trauma system including Emergency Medical Service providers, hospitals designated as trauma centers and rehabilitation centers. This complex system ensures that injured citizens receive the necessary, timely and appropriate care that can mean the difference between life and death and in being able to resume a normal or near-normal life.

This year it is hoped that the Legislature will secure funding to support the state's trauma centers so that they can continue to provide this specialized, high level of care.

- http:/www.scdhec.gov/hr/ems
- Alonzo Smith: smithaw2@dhec.sc.gov • (803) 545-4275

COMMUNITY

and Emergency Management Division, the Health Alert System is being upgraded to provide emergency alerts to partners and the public.

- **Bioterrorism** training and educational initiatives: More than 2,000 DHEC employees have been trained on bioterrorism preparedness topics. The Academy for Public Health Preparedness graduated its first class of more than 70 participants in 2004. Many state, regional and local exercises were held, including a full-scale exercise of the Strategic National Stockpile/ Columbia Metropolitan Medical Response System in October 2004.

- Public health preparedness media campaigns: Media campaigns in 2004 continued to build on the foundation laid the previous year, when localized smallpox vaccination events increased awareness of the state's efforts to bolster public health preparedness. Public service announcements, which received extensive support and airplay from radio and TV stations statewide, helped convey the message that everyone plays a part in preparedness. Risk communication training is being provided to public health staff, hospital communicators and public officials throughout the state.

http://www.scdhec.gov/ophp

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Ongoing Challenges, New Approaches

Preventive oral health services making a difference

Through a grant funded by the U.S. Department of Health and Human Services' Health Resources and Services Administration and the Centers for Disease Control and Prevention, DHEC completed several objectives in 2004 toward improving oral health in South Carolina. Among them were:

- Conducting five community meetings across the state in areas with the greatest oral disease burden to initiate planning for oral health improvement;
- Developing a statewide community-based public awareness oral health campaign involving the use of public service announcements and two robotic characters, Moe Lars and Flora Ida, now stationed at EdVenture Children's Museum in Columbia, to educate the public about the importance of dental sealants and caries prevention;
- Initiating a process for developing a social marketing campaign focusing on increasing public awareness of improving oral health practices among South Carolinians; and
- Establishing regional oral health forums to promote public-private partnerships to address access to dental care for children.

Water fluoridation has resulted in many public health benefits. A 2004 CDC study found that, in communities with more than 20,000 residents, every $1 invested in community water fluoridation yields $38 in savings each year from fewer cavities treated. The National Task Force on Community Prevention Services, which strongly recommends community water fluoridation, concluded that tooth decay in American children has decreased by 30 to 50 percent because of fluoridation. Nationally, water fluoridation has resulted in many public health benefits, including a 66 percent reduction in the incidence of cavities in children.

During 2004, nine community water systems received $94,000 in grant funding from DHEC's Oral Health Division to repair or replace fluoridation equipment. In addition, three South Carolina communities (Hartsville, Rock Hill and Orangeburg) were recognized with 50-year awards for their long-term contributions in fluoridating community water to prevent tooth decay.

http://www.scdhec.gov/oralhealth

S.C. Turning Point Addresses Community Public Health Needs

Six South Carolina counties are the focus of collaborations to assess and improve health through DHEC's participation in **S.C. Turning Point**, a public-private effort that supports community development and planning activities. The vision for Turning Point is to transform and strengthen South Carolina's capacity to protect and improve the public's health by merging professional expertise and community wisdom with political will. The aim is to strengthen leadership within the local public health system to better engage the community in a health assessment and planning process.

Since 1999, the state has received funding from the Robert Wood Johnson Foundation for local initiatives to assess community health through collaborations with government, the business sector and the community. Turning Point is currently working in Orangeburg, Clarendon, Aiken, Georgetown, Pickens and Florence counties. The counties were funded in two two-year phases. Each county is conducting a local public health system assessment of community health services and developing health improvement plans. Collaborations comprised of different public and private partners have been set up in each county to oversee the assessment and to develop plans. DHEC has played a key leadership role in developing and maintaining the collaborations.

"Mobilizing for Action through Planning and Partnership" is a community-engaged strategic planning tool for improving community health. It is used by the National Association of City and County Health Officials. Plans are being made to implement this process statewide. DHEC has the lead role in facilitating this community-wide systems approach to build a strong and effective local public health system.

- http://www.turningpointprogram.org
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Influenza Pandemic Plan Completed

If a new strain of influenza A were to emerge and spread rapidly, thousands of lives could be at risk. It would be critical for the state's public health infrastructure, including state and local agencies, professional medical associations and private health care providers, to respond rapidly to stop the spread of a deadly disease. In 2004, the DHEC Pandemic Influenza Planning Committee completed a draft emergency operations plan that outlines the state's response activities in the event of an influenza pandemic affecting South Carolina. The draft plan was submitted to the S.C. Emergency Management Division (SCEMD) for review as part of the SCEMD Mass Casualty Annex of the S.C. Emergency Operations Plan. The Pandemic Influenza Plan identifies the necessary actions that should take place to control the spread of influenza during a pandemic and to make provisions for the care of those who may become ill. The plan also identifies responsibilities among state agencies, professional medical associations, and other organizations for providing support to the response to an influenza pandemic.

Flu Vaccine Shortage Hits S.C.

When the nation lost half its flu vaccine to contamination in the fall of 2004, the Centers for Disease Control and Prevention in conjunction with states grappled with the best way to use the remaining vaccine to provide the most public health protection. The decision was made that people in the highest-risk categories should receive the available vaccine, and DHEC staff began conducting statewide assessments of where the needs were greatest. By the end of October, all doses available in DHEC clinics had been used or committed to appointments for people in the CDC-defined priority groups. The remaining doses in DHEC possession were distributed to nursing homes, hospitals that had received few or no doses, community health centers, and districts with higher county populations at risk. As additional allotments became available nationwide, DHEC coordinated the notification and ordering for distribution to private providers. By mid-January, demand for the vaccine subsided. South Carolina lifted priority group restrictions in February 2005.

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Asthma Is Both A Health, Environmental Concern

In South Carolina, **asthma** is the leading cause of children's hospitalizations and the leading cause of missed school days. According to the 2003 Behavioral Risk Factor Surveillance Survey, one out of every 10 adults in South Carolina has been diagnosed with asthma at some time in their lives. Asthma is a serious chronic disease, with many triggers in the environment.

The S.C. Asthma Alliance was created in October 1999 to strengthen the link between health and environmental programs within DHEC and with public and private organizations addressing asthma. The alliance, in conjunction with the S.C. Managed Care Alliance, held Asthma and Allergy Universities in 2003 and 2004. The purpose was to provide education on how to better manage asthma and other chronic lung diseases such as chronic obstructive pulmonary disease, discuss triggers that worsen symptoms of asthma and other chronic lung diseases, and discuss medications and their uses in managing asthma and other chronic lung diseases. Triggers discussed included dust, pet dander and mold and outdoor triggers such as ground-level ozone. Ninety-two percent of participants surveyed said they learned something new about asthma and other chronic lung diseases during the 2004 event. Future events will be planned as funding allows.

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DHEC Encourages Public Participation

Community involvement can assist in the promotion and protection of public health and the environment. DHEC does not have regulatory authority over many serious pollution problems South Carolina faces, such as water pollution from stormwater runoff from yards and vehicle exhausts. Eliminating these kinds of pollution problems requires knowledgeable citizens committed to making small voluntary changes in their daily routines to reduce these pollutants. Involving the public in problem solving and decision-making will result in long-term solutions where every South Carolinian is engaged in quality growth that promotes public health and an excellent quality of life.

DHEC defines **public participation** as a full range of actions and processes to involve the public in our work. Through the leadership of DHEC's community liaison and the Environmental Quality Control (EQC) Public Participation Taskforce, the agency is seeking more and better ways to engage public participation. Each EQC program area (Air, Water and Land) has developed a public participation work group to assist with this effort. EQC currently is reviewing all activities to determine the appropriate levels and methods of public participation.

- Nancy Whittle: whittlnc@dhec.sc.gov • (803) 896-8967

Additional resources:

National Association of City and County Health Officials
- http://www.naccho.org

National Healthy Communities programs
- http://www.ncl.org/cs/services/healthycommunities.html

GOAL
Assist Communities in Planning for and Responsibly Managing Growth

Growth Issues Threaten Health, Environment

Over the past 10 years, discussions concerning growth in South Carolina have been increasing. The state is home to 4 million residents, and this number is expected to increase by another million in the next 25 years. It's easy to see why people choose to live in South Carolina. In a few hours you can travel from beautiful white sand beaches, past slow-moving blackwater rivers and scenic forests, into rolling hills and up into the southern Appalachian Mountains. South Carolina ranks as the 14th most biologically diverse state in the nation, according to a 2002 Nature Conservancy report. The state also has a rich cultural history, with people representing many diverse backgrounds and ethnicities. As South Carolina grows, it is important that growth occurs in a wise and orderly manner to protect the state's rich natural resources.

Public health is closely linked to environmental protection. Clean drinking water from a river, lake or groundwater, air that is safe to breathe, and land that is free from contaminants all must be protected during growth. South Carolina citizens and leaders have made many wise choices to protect these natural resources in the past. The challenge is to continue to balance good economic development and job growth with a safe environment. With the hard choices ahead, citizens need to become involved in planning for the future. DHEC works with local governments to develop innovative and cost-effective initiatives that promote quality growth in the state.

Counties Continue Work on Air Quality

By March 2004, 45 of the state's 46 counties had submitted **Early Action Plans** (EAP) on steps they would take toward ozone reduction between now and 2007 to achieve cleaner air sooner than the federal government requires. Entering into this Early Action Compact (EAC) allowed these counties to develop their own clean air strategies and pollution control measures based on what their local needs are rather than have federal requirements forced on them. EPA's new, more stringent 8-hour ozone standard will go into effect Dec. 31, 2007.

The compact required that all counties develop and implement local emission reduction strategies that are economically feasible and that make sense for each individual county. In addition, after meeting with statewide stakeholder groups, including local and federal governments, industry, environmental groups and other interested parties, DHEC developed two regulations to assist with reductions. DHEC is revising the State Implementation

COMMUNITY

Plan to incorporate both the local EAPs and the statewide efforts. A number of federal control measures already in place or scheduled for implementation over the next several years show that areas in South Carolina currently not meeting the new ozone standard will meet the standard by December 2007 and beyond. As a result of the commitment to the EAC process, South Carolinians will obtain the public health and environmental benefits of cleaner air sooner.

- http://www.scdhec.gov/baq
- Henry Phillips: phillimh@dhec.sc.gov • (803) 898-3260.

Hydroelectric Dam Impact Review Continues

DHEC continued in 2004 to evaluate the potential impact on water quality from hydroelectric dams as part of the Federal Energy Regulatory Commission's **dam relicensing** process, which occurs every 30 to 50 years. There are five facility-relicensing efforts currently under way that affect South Carolina rivers. These are the S.C. Electric and Gas facility on the Lower Saluda River, the Santee Cooper facilities on the Cooper and Santee rivers, the Duke Power facilities on the Catawba River, the Augusta Canal Hydroelectric Project on the Augusta Canal on the South Carolina-Georgia state boundary, and the Progress Energy and Alcoa facilities on the Yadkin-Pee Dee River that flows into South Carolina from North Carolina. DHEC must certify that these facilities will not violate state water quality standards. Staff is currently working with each facility and stakeholder group to ensure that state water quality standards and existing and classified uses of these river systems are maintained. The license renewals are rare opportunities for DHEC and the stakeholders within these watersheds to work with the dam license holders to develop and implement long-term programs that will benefit everyone within the watershed.

- Quentin Epps: eppsbq@dhec.sc.gov • (803) 898-4249

All Entities Must Manage Stormwater Runoff

DHEC regulates more than 1,000 active permitted industrial and construction sites to ensure that waters of the state are protected from stormwater pollution. Through a variety of permits over the past decade, developers, industrial sites and even municipalities have been required to develop and implement plans to identify and control sources of pollution in stormwater runoff.

South Carolina also currently regulates two Municipal Separate Storm Sewer Systems. These entities represent large metropolitan areas in the Upstate and central regions of the state. DHEC anticipates issuing approximately 70 similar permits to entities of less populated urbanized areas. These permits require municipalities to develop and implement programs to address stormwater runoff in their communities. This will be the first time many small communities have had to implement and enforce such programs.

Over the past two years, DHEC provided free technical guidance and outreach to industrial facilities on stormwater control. DHEC has an ongoing effort to inform the regulated community

of its obligations to comply with stormwater regulations. A cooperative effort with the S.C. Forestry Commission is in place to identify stormwater problems from silviculture operations. DHEC also helps the regulated community comply with regulations by providing technical assistance to permitted industries during routine site inspections (See "What is Compliance Assistance?" pages 21 and 54). **Compliance assistance** is coordinated through DHEC's 12 EQC district offices located throughout the state, which this year will be merged into eight regional offices to improve efficiency.

- http://www.scdhec.gov/water
- Glen Trofatter: trofatge@dhec.sc.gov • (803) 898-4233

DHEC's Small Business Assistance Program
- Phyllis Copeland: copelapt@dhec.sc.gov • (803) 896-8982

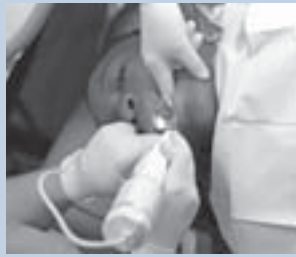
Local Plans to Protect Drinking Water Sources Being Developed

To achieve better protection of drinking water sources, stakeholders—including federal, state, local governments, citizen groups and the public —must develop and implement successful local protection plans. DHEC outlines for the stakeholders a range of management options to assist in developing these plans. These can range from nonregulatory strategies, such as public education, signs or land ownership, to regulatory options at the local level, such as zoning or specific land use ordinances.

An amendment to the Safe Drinking Water Act established the national Source Water Assessment and Protection (SWAP) Program. SWAP incorporated the existing Wellhead Protection Program for groundwater sources of drinking water. DHEC conducted an assessment of each federally defined public water system in South Carolina. An assessment

609 Churches Recognize Oral Health Sunday

The 7th District of the African American Methodist Episcopal (AME) Church instituted "Oral Health Sunday" on Feb. 8, 2004. Each of the 609 AME churches received a tool kit of information on oral health tips for families, and the oral health message was incorporated into each church's worship service. Many churches sponsored oral health fairs at which dentists and dental hygienists voluntarily screened children for decay. Event organizers estimated that more than 100,000 community members and parishioners were educated about the importance of oral health. The DHEC/AME church partnership is an effort by the "More Smiling Faces in Beautiful Places" project, funded by the Robert Wood Johnson Foundation, aimed at improving oral health and access to dental care for children up to age 6 and special-needs individuals. This partnership is one of several prevention initiatives supporting the AME church Strategic Health Plan developed in partnership with DHEC. For more on preventive oral health services, see page 36.



Benefits of Trees Shown in Demonstration Project

DHEC's EQC Education and Outreach work group, in partnership with the S.C. Budget and Control Board's Horticulture Services Department, implemented a tree-planting and education program in 2004 to bring attention to the human health benefits of trees in an urban landscape. With a grant from the Urban and Community Forestry Grant Assistance program, trees were planted to replace a portion of the grass lawn at DHEC's central office on Bull Street in Columbia. Planting trees helps reduce stormwater runoff, cool the urban environment and improve air quality. By reducing the amount of grass to cut on the DHEC building's lawn, the result will be less mowing and a reduction in air pollution from the gas lawn mower exhaust. The project grant is administered through the S.C. Forestry Commission and funded by the U.S. Department of Agriculture Forest Service.

- http://www.scdhec.gov/recycle
- Diane Marlow: marlowda@dhec.sc.gov • (803) 896-4158

COMMUNITY

consists of several steps: 1) determining the area around the well or surface water intake to be protected, 2) inventorying the potential contamination sources within this protection area, 3) completing a susceptibility analysis for each system, and 4) providing those results to the public. The completed assessments were provided to the public water systems in 2003, and an abbreviated version is available on DHEC's Web site.

DHEC is encouraging teams of representatives from the public water system management, local organizations, state and local government and individual citizens to develop local management strategies that protect community drinking water sources. The team should include the public water supply manager, representatives of those government bodies that have authority over land use in the protection area, and owners/operators of businesses within the protection area. DHEC and the S.C. Rural Water Association can provide technical assistance to any public water system wanting to develop a local protection plan.

- http://www.scdhec.gov/water
- David Baize: baizedg@dhec.sc.gov • (803) 898-4272

Ongoing Challenges, New Approaches

Land Revitalization a Priority

More and more, the importance of protecting our land for future generations is becoming apparent. Cleaning up contaminated properties for reuse protects human health, preserves forests and wetlands, and spurs economic growth. DHEC strives to restore hazardous waste sites so they can be productive for their communities. EPA has begun an effort called the Land Revitalization Initiative. This initiative emphasizes that cleanup and reuse are mutually supportive goals and that property reuse should be an integral part of the way to do business, regardless of whether a property is a Superfund site, an operating waste disposal site, a petroleum facility, a former gas station or an abandoned industrial facility. Following are examples of how DHEC is incorporating land revitalization into its efforts.

Brownfields Properties Address 2,000 Acres

The Brownfields/Voluntary Cleanup Program, which became law in 2000, allows nonresponsible parties an opportunity to partner with DHEC to restore a property for either economic or greenspace purposes. Through the Voluntary Cleanup Program, DHEC has negotiated 70 nonresponsible party contracts since 1996. The nonresponsible party (Brownfield) contracts total about 2,000 acres being redeveloped in the state.

- http://www.scdhec.gov/lwm
- Gail Jeter: jetergr@dhec.sc.gov • (803) 896-4069

Petroleum Brownfields Properties Get Funding

DHEC has successfully obtained federal grants to assess contamination at **petroleum brownfield** sites across South Carolina. These sites not only have environmental concerns from leaking or potentially leaking underground fuel tanks, they also are economic blights on their communities. DHEC partners with municipal governments and other local groups to identify these sites for environmental assessments and

assistance with redevelopment plans. Furthermore, DHEC's Underground Storage Tank Program is the designated administrator of three EPA grants for petroleum brownfield redevelopment projects in the cities of Anderson and Greenville and the town of Jackson. Economic, social and aesthetic revitalization will occur in these areas as a result of the collaborative efforts.

- http://www.scdhec.gov/ust
- Kent Coleman: colemakc@dhec.sc.gov • (803) 896-6249

Superfund Offers Site Cleanup

The State Superfund Remediation Section addresses polluted hazardous waste sites across the state. **Superfund** cleanups return contaminated sites to productive use. DHEC strives to clean up these sites for productive use with stringent cleanup remedies so that the properties will be ready for reuse when a potential purchaser arrives. Therefore, DHEC, through the Voluntary Cleanup Program, allows responsible parties to enter into the program to address environmental concerns at sites they previously operated. Property may be cleaned up to industrial standards if land use controls or restrictive covenants are placed on the property for future use. Since its inception, 43 responsible parties have entered into the Voluntary Cleanup Program.

- Keith Lindler: lindlejk@dhec.sc.gov • (803) 896-4052

Newberry College a Smoke-Free Model

College years are a prime time for students to get hooked on tobacco, which has been linked to poorer academic performance and alcohol and drug abuse. About 30 percent of college students use tobacco, with more than 20 percent having started after college enrollment, according to the Tobacco Technical Assistance Consortium Web site (http://www.ttac.org).

Starting with the 2004-05 school year, all residence halls, administration buildings and athletic facilities on the Newberry College campus went smoke-free, with a restriction of no smoking within 15 feet of any building entrance. DHEC partnered with the Newberry County Tobacco Intervention and Prevention Strategy Program to draft a model campus tobacco policy, and Newberry College was chosen as a pilot site because of its size and rural location. In April 2004, school officials and student government organizations endorsed the recommended policy.

At Newberry College, the newly hired football coach has required his athletes to give up tobacco products to be on the team. Future DHEC measures include working with the college on enforcement issues and making presentations to their College Life 101 classes.

COMMUNITY

Hazardous Waste Sites Get Attention

The State Resource Conservation and Recovery Act Program addresses contaminated hazardous waste facilities operating within communities across the state. DHEC staff oversee cleanup activities that property owners are conducting to ensure that the process will be protective of human health and the environment. The program encourages facilities to clean up to the unrestricted land use standard, while acknowledging that some owners might choose a remedy that reaches only an industrial standard. In these cases land use controls and financial assurance is required to assure that the remedy can be maintained.

Special situations have allowed DHEC to work with owners to negotiate positive outcomes such as redevelopment and job creation. An example is allowing a new owner to enter into a consent agreement with DHEC instead of continuing and not being able to maintain an existing permit. Another solution is to allow new owners of property with land use controls to enter into a voluntary cleanup contract in lieu of taking full responsibility for the site. This solution is an option for current owners if the responsible, previous owner agrees to be accountable for, by paying for, the cleanup remedy selected.

John Litton: littonjt@dhec.sc.gov • (803) 896-4172

Cleanup Continues at Drycleaning Sites

Currently, 306 contaminated **drycleaning** sites are being addressed through the Drycleaning Restoration Trust Fund established in 1995. Eight sites are currently being cleaned up, and 21 sites are being investigated. The fund allows DHEC to conduct environmental assessments and clean up participating drycleaning sites. Owners of drycleaning facilities who wanted to address real or perceived environmental contamination at their facility prompted the fund's creation. The pollution was caused by the nature of the business before drycleaning solvents were regulated.

http://www.scdhec.gov/lwm

DHEC Cracks Down on Open Dumping

Over the years, illegal or **open dumping** has been a major environmental issue in South Carolina. DHEC has managed the issue through its district solid waste inspectors and solid waste enforcement section. A new criminal investigation unit launched in 2003, however, currently is working on 174 active cases and has obtained 73 convictions toward further curbing the illegal dumping problem.

DHEC's three criminal investigators make up the Office of Criminal Investigations (OCI), which focuses on the more serious open dumping cases—particularly repeated open dumping or the operation of illegal landfills.

Local litter officers continue to address one-time open dumping or littering by individuals. Referrals are made to the OCI when DHEC's solid waste inspectors discover open dumps or a complaint is received from the public. A Solid Waste Criminal Review Group determines if the referral needs further investigation. The investigators take their cases to either a circuit court judge or a local magistrate.

Since its inception, more than 240 cases have gone through the OCI. In addition, 86 arrest warrants have been issued by circuit courts. Sentences have ranged from the party having to clean up the open dump to a fine of $1 million and eight years in prison. More than 30 tickets have been issued through magistrate courts, with fines from $50 to $1,475.

DHEC believes that, as convictions increase, word will spread and open dumping will be deterred. To help with this approach, DHEC has encouraged local governments to review their solid waste plans to ensure there are adequate disposal facilities within reasonable driving distances.

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Additional resources:

The Nature Conservancy
http://www.natureserve.org/Reports/stateofunions.pdf

U.S. EPA Brownfields Cleanup and Redevelopment
http://www.epa.gov/swerosps/bf/index.html

What is Compliance Assistance?

DHEC renewed its emphasis on compliance assistance in 2004. Compliance assistance is assistance that provides clear and consistent information to help business, industry and government understand and meet their environmental obligations. DHEC partners with other assistance providers to develop and deliver compliance assistance.

Compliance assistance activities include: on-site assistance; workshops, conferences and training; telephone assistance; booklets, fact sheets and brochures; and Web-based information and special mailings. Compliance assistance is part of the agency's commitment to customer service and is provided as part of activities that include public education and outreach, permitting, compliance and enforcement. Compliance assistance is not a substitute for enforcement and is not intended to prolong a timely and appropriate return to compliance by a regulated entity, but is a proactive way to help avoid negative environmental impacts and the enforcement actions that may result. For more on compliance assistance, see pages 17 and 54.

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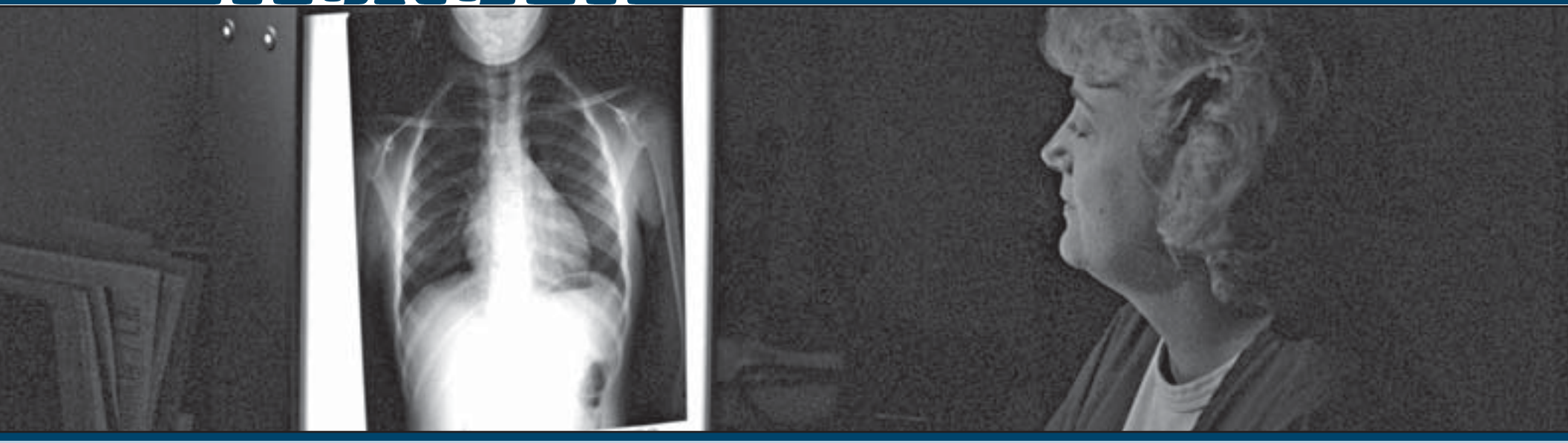
CHAPTER 2
HEALTH



Improve Health for All and Eliminate Health Disparities

Cardiovascular Disease • Cancer
Diabetes • HIV/AIDS
Infant Mortality • Immunization

Ongoing Challenges, New Approaches

Obesity • HIV Testing

Assure Children and Adolescents are Healthy

Pregnancy Planning • Teen Pregnancy
Prenatal Care • Infant Mortality
Prematurity • Newborn Screening
Postpartum Newborn Home Visits
Immunization • Unintentional Injuries

Ongoing Challenges, New Approaches

Family Medical and
Dental Home Needs

Increase the Quality and Years of Healthy Life for Seniors

Preventive Health
Growth of Senior Population
Long-Term Care • Arthritis
Influenza • Cardiovascular Disease
Diabetes • Cancer • Falls • Suicide

Ongoing Challenges, New Approaches

Healthy Aging • Institutional Alternatives

South Carolinians enjoy better health and quality of life today because of advances in both technology and our understanding of how our environment and lifestyle behavior throughout the lifespan contribute to our overall well-being. We celebrate our children's health this year with continued high immunization rates, fewer infant deaths and expanded newborn screenings to detect and treat genetic conditions earlier. Our senior population continues to grow and faces its own unique challenges, among them ways to maintain more years of a quality life outside of institutions. Yet when certain segments of our population suffer greater burdens of disease and death, the whole population suffers. This "disparity gap," the difference between the incidence or prevalence of a condition among two or more groups, is a particular concern in South Carolina, where blacks face disparate rates of infant deaths, HIV/AIDS, cardiovascular disease and diabetes, to name a few. Partnering with communities to address their specific health issues in all age and race/ethnic groups can significantly improve the health status of South Carolina.

HEALTH

GOAL
Improve Health for All and Eliminate Health Disparities

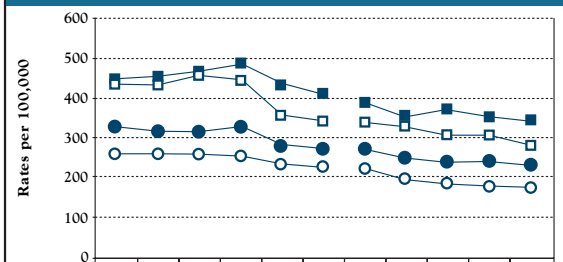
Cardiovascular Disease (CVD) Remains South Carolina's Leading Cause of Death

Coronary heart disease and **stroke** are the principal components of cardiovascular diseases. In South Carolina, heart disease and stroke are the first and third leading causes of death, accounting for one-third of the deaths reported in 2003. CVD hospitalizations, emergency room visits and deaths are even more prevalent among blacks, the underserved and rural residents. Black men are more than twice as likely to die of CVD, while black women have 50 percent more strokes than white women. At a rate of 90 percent higher than that of white men, black men have the highest stroke death rate. South Carolina's age-adjusted death rates for heart disease (235 deaths per 100,000) and stroke (68.8 deaths per 100,000) in 2003 exceed the Healthy People 2010 goals of no more than 166 and 48 deaths, respectively, per 100,000.

In partnership with a variety of health, business and community leaders, DHEC has developed and implemented a statewide plan to reduce the toll that CVD takes on South Carolina residents and improve overall cardiovascular health. The plan identifies African-Americans as a priority population and uses health promotion efforts targeting communities, work sites, schools, faith communities and health care systems. For more information on the state plan, see page 7.

http://www.scdhec.gov/cvh

S.C. Heart Disease Death Rates*

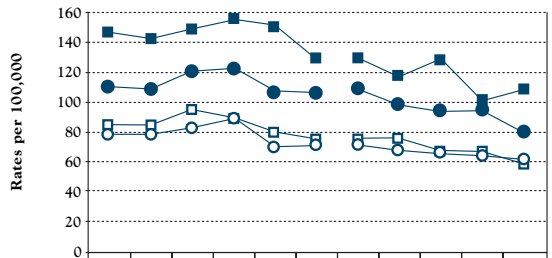


	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Male	439.1	434.2	462.7	443.2	363.3	346.6	341.9	331.0	307.9	305.7	286.2
White Female	261.3	261.4	260.9	257.3	221.3	217.4	211.4	199.3	187.4	181.0	174.7
Black Male	455.4	462.8	473.5	494.2	431.1	411.4	391.2	362.7	383.1	357.9	347.8
Black Female	328.4	314.5	318.2	326.5	281.6	272.8	273.4	253.7	236.7	238.1	228.3

*Age Adjustment Uses 2000 Standard Population
Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

2003 Total Rate=235.0
HP2010=166

S.C. Stroke Death Rates*



	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Male	84.6	84.9	94.4	90.5	80.5	74.5	74.6	76.5	66.1	66.4	59.8
White Female	79.2	79.6	83.7	90.5	70.5	73.6	75.3	68.7	67.0	62.8	61.5
Black Male	145.1	142.3	148.9	156.5	150.0	131.4	132.3	119.2	128.4	102.6	114.2
Black Female	111.9	108.5	120.8	123.4	107.4	105.6	110.0	99.7	96.0	96.8	80.5

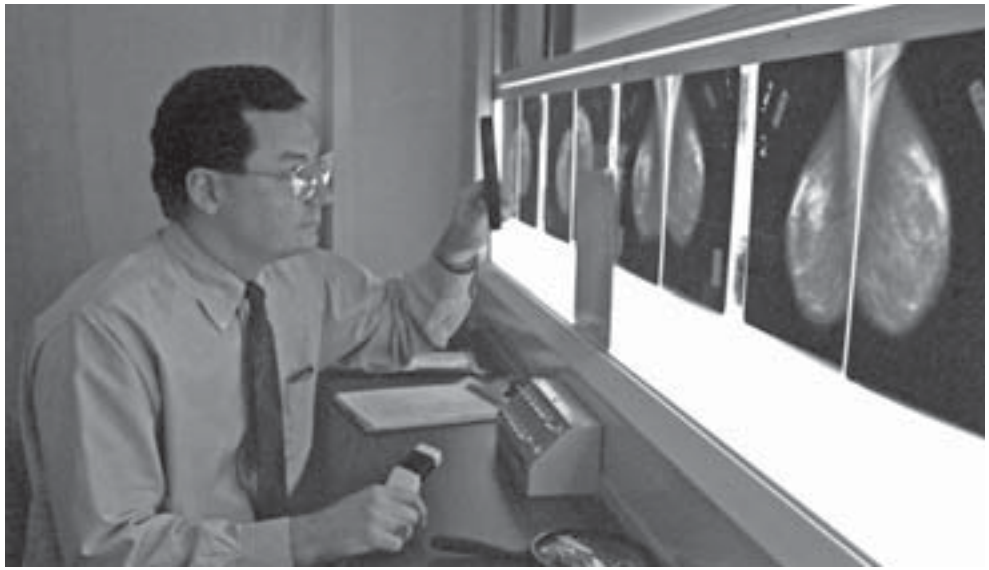
*Age Adjustment Uses 2000 Standard Population
Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

2003 Total Rate=68.8
HP2010=4

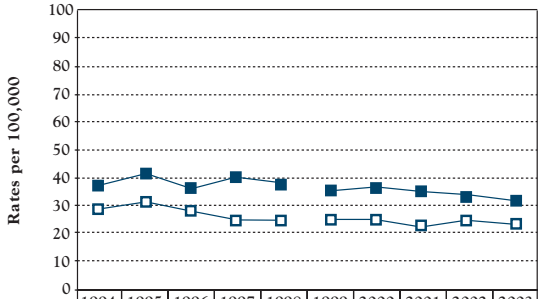
More African-Americans Suffer from Three Cancers

Breast cancer is the most commonly diagnosed cancer among women in South Carolina, regardless of race, accounting for more than 30 percent of all female cancer cases. While white women are more often diagnosed with breast cancer, more black women are diagnosed at later stages, resulting in increased death rates. While breast cancer deaths have declined since 1990 among white and black women, a disparity in the death rates continues.

From 1997 through 2001, South Carolina's cervical cancer death rate of 3.6 per 100,000 is higher than the U.S. rate of 2.9 per 100,000, the most current five-year U.S. rate available. A higher percentage of black women were diagnosed with late stage cervical cancer than were white women (39.5 percent and 28.5 percent, respectively). South Carolina's cervical cancer death rate has declined over the past decade. Even though the rates among black women are



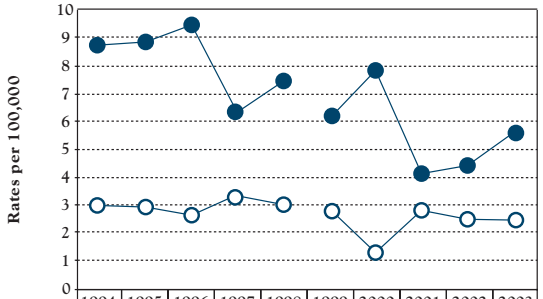
S.C. Breast Cancer Death Rates*



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Female	29.1	31.0	27.5	24.4	24.7	25.6	25.5	22.7	25.0	23.1
Black Female	37.0	41.2	36.4	40.8	37.3	35.4	36.9	35.1	32.2	31.5

*Age Adjustments Use 2 Standard Population
Data Source: SC DHEC PHSIS-SCCCR
Years 1999+ used ICD-1

S.C. Cervical Cancer Death Rates*



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Female	3.0	2.9	2.6	3.2	3.0	2.8	1.3	2.8	2.3	2.3
Black Female	8.7	8.8	9.4	6.3	7.5	6.1	7.9	4.1	4.4	5.6

* Age Adjustments Use 2 Standard Population
Data Source: SC DHEC PHSIS-SCCCR
Rates calculated using small numbers are unreliable and should be used cautiously
Years 1999+ used ICD-1

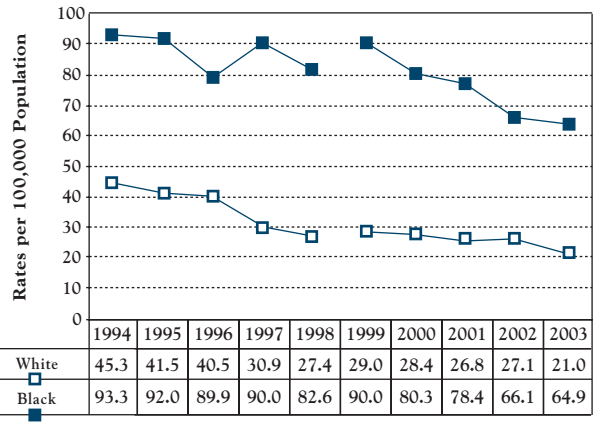
HEALTH

decreasing, disparities continue to persist. Black women are more than twice as likely to die from cervical cancer as white women.

Both breast and **cervical cancer** can be diagnosed early, reducing deaths. DHEC's Best Chance Network (BCN) provides breast and cervical cancer screening for low-income women ages 47-64 through a network of physicians and clinics. Regular Pap tests will help detect pre-cancerous conditions before cervical cancer develops. In 2003, BCN screened more than 7,800 women.

In South Carolina, regardless of race, **prostate cancer** is the most commonly diagnosed cancer among men, accounting for 30 percent of all male cancer cases. From 1997 through 2001, South Carolina's death rate of 40.7 per 100,000 is almost 30 percent higher than the U.S. rate of 31.5 per 100,000, the most current five-year rate available for the nation.

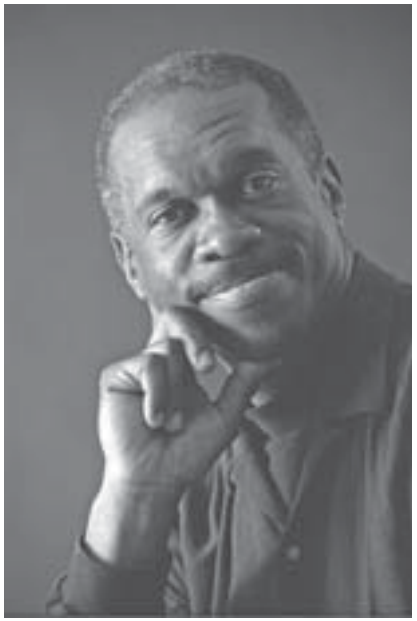
*S.C. Prostate Cancer Death Rates**



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	45.3	41.5	40.5	30.9	27.4	29.0	28.4	26.8	27.1	21.0
Black	93.3	92.0	89.9	90.0	82.6	90.0	80.3	78.4	66.1	64.9

* Age Adjustments Use 2 Standard Population
Data Source: SC DHEC PHSIS-SCCCR
Years 1999+ used ICD-1

During this same time period, a higher percentage of ethnic minority men were also diagnosed with late stage prostate cancer than were white men (18.4 percent and 14.1 percent, respectively). The likelihood of survival is lower when prostate cancer is diagnosed at a later stage when it has spread to the lymph nodes or to other parts of the body. Early detection will help diagnose prostate cancer at earlier stages when treatment is more effective and successful.



Prostate cancer death rates have been decreasing among both white and black men. Disparities continue to exist, however. Three times more black men die of prostate cancer than white men.

DHEC, in partnership with community agencies and churches, has been coordinating a prostate cancer education and screening program, Real Men Checkin' It Out, targeting African-American males. Education materials are distributed through barbershops, places of worship, funeral homes, car repair shops and other places where men are likely to be found. Prostate screening and follow-up are also arranged through local physicians and hospitals.
For information on cancer among seniors, see pages 41 and 66-68.

- http://www.scdhec.gov/omh
- http://www.scdhec.gov/cancer
- Irene Prabhu Das: prabhudi@dhec.sc.gov • (803) 545-4103
- Gardenia Ruff: ruffgb@dhec.sc.gov • (803) 898-3808

Diabetes Continues to rise

Diabetes is the sixth leading cause of death in South Carolina, claiming 1,161 lives in 2003. Diabetes has an immense impact on public health and medical care because it increases an individual's risk for blindness, lower extremity amputation, kidney failure, nerve disease, hypertension, ischemic heart disease and stroke.

The overall prevalence of diabetes has increased during the past 16 years, from 5.6 percent in 1988 to 9.3 percent in 2003 among adult residents of South Carolina. It increased persistently from 1997 to 2001, with the most dramatic increase (130 percent) among black men. The 2003 statewide prevalence rate among blacks was 15.5 percent and 9.9 percent among Hispanics, compared with 7.3 percent among white South Carolinians. However, the racial disparity is narrowing, not because of an improvement in minority rates, but rather because of an increase in diabetes among the white population.

More than 600,000 South Carolinians are affected by diabetes, many of whom are undiagnosed. One of every seven patients in a South Carolina hospital has diabetes. The complications of diabetes can be prevented or delayed through improved blood sugar, blood pressure and cholesterol control, healthy eating, increased physical activity and proper foot care through daily foot checks and an annual examination by a health professional. The total direct and indirect costs of hospitalizations and emergency room visits for diabetes in South Carolina were more than $928 million in 2001, the most current year available.

Personal Responsibility for Health Important to Cancer Survival

Early detection of certain forms of cancer is the best way to survive cancer. Following screening recommendations for early detection of cancer can improve cancer survivorship. Screening techniques can help diagnose specific types of cancer early and prevent unnecessary deaths.

In addition to screening services for breast cancer, women should have regular **Pap tests**. A Pap test is an easy procedure to diagnose cervical cancer early, or even before cancer develops. Women ages 47-64 with no, or limited, health insurance may qualify for free breast and cervical screening services provided through the Best Chance Network.

Older men should have a **PSA** blood test and an annual prostate exam to detect prostate cancer early. The American Cancer Society recommends yearly testing for men ages 50 or older. Black men and men with a family history should have a yearly exam beginning at age 45.

Several screening techniques can diagnose colon cancer early. It is the third most common type of cancer diagnosed. The rate of survival for colon cancer is high when it is diagnosed in the early stages. The following screening techniques are recommended for adults 50 years and older: fecal occult blood test yearly, flexible sigmoidoscopy every five years, yearly fecal occult blood test plus flexible sigmoidoscopy every five years, double-contrast barium enema every five years, and colonoscopy every 10 years.

Screening recommendations do not apply to all individuals. South Carolina residents with a family history of cancer or personal history of risk factors or earlier cancers might need to follow earlier screening patterns. The best way to ensure proper screening is to talk with a doctor.

Division of Cancer Prevention and Control
- http://www.scdhec.gov/cancer
- Irene Prabhu Das: prabhudi@dhec.sc.gov • (803) 545-4103

Best Chance Network
- http://www.scdhec.gov/cancer

HEALTH

DHEC's Diabetes Prevention and Control Program is funded by the Centers for Disease Control and Prevention (CDC) to prevent diabetes, improve diabetes care and reduce health disparities related to diabetes in South Carolina. For more on the program, see page 9. For information on diabetes in the senior population, see pages 40 and 67.

- http://www.scdhec.gov/diabetes
- Rhonda Hill: hillrd@dhec.sc.gov • (803) 545-4469

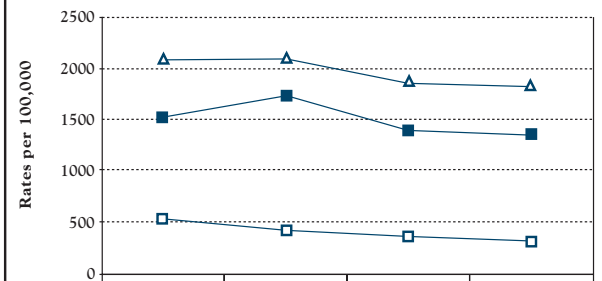
HIV/AIDS Affects More Southerners, African-Americans

According to recent CDC **HIV/AIDS** surveillance data, the South comprises an increasing share of the estimated number of new AIDS cases diagnosed each year compared with the rest of the U.S. The South has the highest number of AIDS cases among women in the country. The number of people living with HIV, including AIDS, continues to increase steadily in South Carolina. As of December 2003, there were more than 13,200 people living with HIV/AIDS. More than 880 persons are newly diagnosed with HIV (including AIDS cases) each year. New HIV treatments and strengthened HIV care services have contributed to a 55 percent decrease in deaths due to HIV/AIDS between 1994 and 2002.

Statistics show that black men and women suffer a greater burden of the disease than whites, creating a "disparity gap" measured by the difference between the rates among whites and blacks. Certain age groups also experience higher incidence of the disease. Currently in South Carolina:

- Blacks account for 30 percent of the state's population yet 77 percent of the HIV/AIDS cases recently diagnosed in South Carolina. Three percent of new cases are Hispanic/Latino.

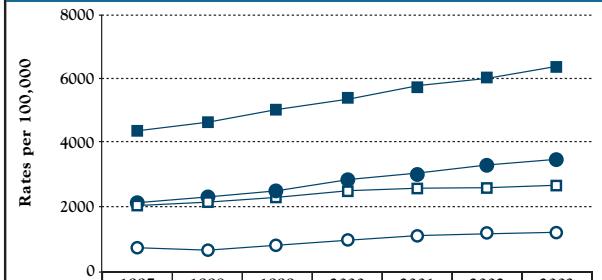
S.C. New HIV/AIDS Case Rates Per 100,000 Population, by Race



	1996-1997	1998-1999	2000-2001	2002-2003
White	572	436	371	337
Black	1598	1735	1461	1349
Total	2177	2182	1841	1713

Data Source: SC DHEC HIV/AIDS Surveillance

S.C. Number of Persons Living With HIV/AIDS by Race/Gender



	1997	1998	1999	2000	2001	2002	2003
White Male	2054	2192	2282	2987	2487	2577	2679
White Female	402	444	477	514	541	571	596
Black Male	4201	4684	5052	5386	5729	6026	6288
Black Female	2119	2323	2559	2776	2979	3175	3363

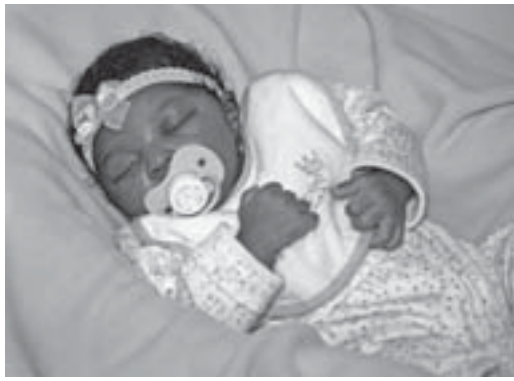
Data Source: SC DHEC HIV/AIDS Surveillance

- Black men and women have been hardest hit by the epidemic. More than seven of every 10 men becoming infected are black (73 percent), and more than eight of every 10 women diagnosed (83 percent) are black.
- Black women account for a steadily increasing proportion of new HIV/AIDS cases, representing 30 percent of new cases diagnosed in 2003 (vs. 20 percent in 1990).
- Youth and young adults of all races 13-24 years accounted for 15 percent of the new HIV/AIDS diagnosed in South Carolina.
- The rate of persons living with HIV/AIDS per 100,000 in 2003 was five times higher for black males than for white males and 12 times higher for black females than for white females.
- Most of the more than 13,200 people living with HIV in South Carolina are ages 20-39 (9,062), and 709 are children and teenagers under 20 years.

http://www.scdhec.gov/stdhiv

Infants Continue to Die at Disparate Rates

Infant mortality is one of the six priority health disparity areas in South Carolina and should be included in any health disparity effort. The infant death rate for blacks in South Carolina (13.0 deaths per 1,000 live births in 2003) is more than twice that of whites (5.9 deaths per 1,000 live births). The percent of black babies born with **low birth weight** (15.1 percent) is almost twice that of white babies (7.6 percent). Nationally, black mothers in every age category (not just teens) have a greater risk of losing their babies than white mothers of similar age. College-educated black women also experience a disparate rate of infant deaths. Planning pregnancy and receiving early and adequate prenatal care are steps toward improvement, but not the only solutions. South Carolina is one of four states to receive federal funds to implement strategies targeted toward reducing the racial disparity in infant mortality. DHEC is implementing activities within the Waccamaw Public Health District, which has the highest black infant mortality rates in the state, to expand and develop community and health care provider capacity to reduce risks of low birthweight and infant deaths. For more on infant death rates, see pages 33 and 63.



http://www.scdhec.gov/mch

Vaccine Preventable Diseases an Ongoing Challenge

Influenza (the flu) and pneumonia together are the eighth leading cause of death in South Carolina, claiming 756 residents ages 65 and older in 2003. Influenza epidemics cause an average 36,000 deaths and more than 200,000 excess hospitalizations annually in the United States. The primary option for reducing the effect of influenza is taking the flu vaccine, either as the shot or the nasal spray.

Those who neglect or refuse to get flu shots include a disproportionate number of minorities. Minorities, especially those who aren't fluent in English, are less likely to know or be informed by a physician that they need a flu shot every year. Raising flu vaccination rates among minorities will require shattering some myths, especially the biggest myth of all, that the vaccine causes flu.

Some of DHEC's influenza prevention strategies include health care provider education, community and coalition collaborations to establish nontraditional

HEALTH

vaccination sites, increasing access to vaccinations through reminder/recall interventions and use of standing orders, and efforts to increase public awareness about the flu. For more on immunization rates among seniors see pages 39 and 76.

- http://www.scdhec.gov/immunization
- Jesse Greene: greeneje@dhec.sc.gov • (803) 898-0460

Ongoing Challenges, New Approaches

Obesity a Risk Factor for Major Health Conditions

The problem of **obesity** affects all demographics in South Carolina. The statistics, self reported by South Carolinians in the Behavioral Risk Factor Surveillance Survey, are disturbing:

- Three of five adults in South Carolina are either overweight or obese.
- Seven out of 10 black adults in South Carolina are overweight or obese.
- More than half of all South Carolinians do not get adequate amounts of physical activity or are totally inactive.

- Nearly two-thirds of blacks in the state do not get adequate amounts of physical activity or are totally inactive.
- Nearly half of all youth in South Carolina watch more than two hours of television per day. Almost two-thirds of black youth in South Carolina watch more than two hours of television per day.

The prevalence of adult obesity in South Carolina costs approximately $1 billion in medical expenditures, with about half the costs funded by Medicare and Medicaid.

DHEC is implementing the second year of a grant that addresses obesity issues. Efforts continue to focus on balancing caloric intake and expenditure, increased fruit and vegetable consumption, increasing breastfeeding, increasing physical activity and decreasing TV/computer time. The grant coordinates a statewide partnership to address obesity prevention and control with representatives from nonprofit organizations, academia, health care and private partners targeting community organizations, schools, health care settings and work sites. The goal is to develop a statewide, comprehensive plan with specific goals and activities to address obesity prevention and control. For more on obesity prevention activities, see page 8. For lifestyle behavior data, see page 72.

- http://www.scdhec.gov/cvh
- Erika Kirby: kirbye@dhec.sc.gov • (803) 545-4476

More Testing Can Curb HIV Epidemic

The HIV epidemic remains dynamic throughout urban and rural South Carolina. Unlike other major diseases, HIV mostly affects adults ages 18-44 years who are in their most productive working years.

The number of new infections diagnosed each year appears to be level, but people are still being diagnosed late in their disease. Thirty-seven percent first find out they have HIV less than one year before AIDS diagnosis.

Race and ethnicity are not the lone risk factors for HIV infection. However, African-Americans are more likely to face challenges linked with HIV risk, such as poverty, substance use, denial and stigma, and are more likely to have sexual partners at risk. New approaches to fighting HIV include urging more HIV testing in both medical and community settings for early diagnosis and entry into treatment and prevention services. New rapid HIV tests delivered by community organizations and local health departments will help reach people earlier in South Carolina.

Additional resources:

American Cancer Society
http://www.cancer.org

Centers for Disease Control and Prevention
Office of Minority Health
http://www.cdc.gov/omh/default.htm

National Institutes of Health
http://nih.gov/

GOAL
Assure Children and Adolescents Are Healthy

Planning for Pregnancy Improves Baby's Health

Women who became pregnant when they did not want to be pregnant at all (called unwanted pregnancy), or who did not want to become pregnant at that time (called mistimed pregnancy), together make up the total number of women considered to have had an **unintended pregnancy**. Women who are unintentionally pregnant are less likely to take care of themselves and their child, and might have a greater chance of having a baby who is not healthy at birth. In 2003, the most current year for which data are available, 47.5 percent of women in South Carolina giving birth became pregnant unintentionally, the same percentage as in 2002. Black women were 41 percent more likely than white women to have an unintended pregnancy (51.4 percent for black women compared with 30.1 percent for white women). The state is far from the Healthy People 2010 goal for the nation of no more than 30 percent of pregnancies to be unintended.

http://www.scdhec.gov/mch

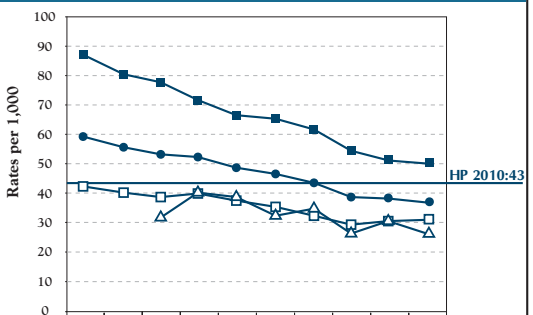
HEALTH

Teen Pregnancy Drops

The **pregnancy rate among teens** 15-17 in South Carolina remained at 38.2 per 1,000 teens in 2003, the same as in 2002. From 1996 through 2003, the rate decreased 22 percent for white, 34 percent for black, and 15 percent for other teens. (The numbers for other racial and ethnic teens are very small, decreasing from 41 to 35 pregnancies from 2002 to 2003.) The pregnancy rate for black teens is still considerably higher than for white teens, but encouragingly, the disparity is decreasing over time. For more information on teen pregnancy, see page 64.

http://www.scdhec.gov/co/phsis/biostatistics

Trends in S.C. Adolescent Pregnancy Rates by Race, Ages 15-17



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	41.7	40.1	38.6	39.8	37.3	35.0	32.3	29.2	30.2	30.1
Black*	88.2	81.7	77.6	71.6	66.3	65.3	61.1	54.2	51.2	51.4
Other	43.3	30.3	31.1	40.0	38.4	32.2	34.4	26.0	30.4	26.3
Total	59.2	55.5	53.0	52.1	48.5	46.5	43.2	38.6	38.2	38.2

*Prior to 1994-1996, Black includes Black & Other
Data Source: SC DHEC Biostatistics

Early and Continuous Prenatal Care Important for Pregnant Women

Early and continuous **prenatal care** is important for all pregnant women for their own well-being as well as that of their growing fetus. The percent of all women entering prenatal care during the first three months of pregnancy has decreased recently in South Carolina, while the gap between black and white women accessing care early remains unchanged (see data, page 63). In 2003, 76 percent of all pregnant women began their prenatal care in the first trimester (80 percent for white and 69 percent for black women and women of other racial and ethnic minorities). The state is far from the Healthy People 2010 goal for the nation of 90 percent. The state is also far from the 2010 goal of 90 percent of pregnant women receiving adequate prenatal care (an appropriate number of visits). In 2003 in South Carolina, 73 percent of all pregnant women received adequate care (76 percent for white women and 68 percent for black and other women).

http://www.scdhec.gov/mch

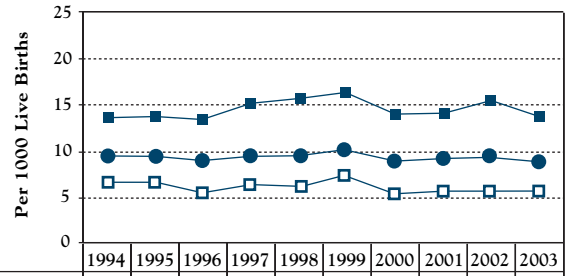
Infant death rates improve

South Carolina's **infant death** rate decreased in 2003, when 8.3 infants died for every 1,000 live births, compared with 9.3 in 2002 and 8.9 in 2001. South Carolina remains above the United States rate of 7.0 (in 2002) as well as the Healthy People 2010 goal for the country of no more than 4.5 deaths per 1,000 live births.

The 2003 infant mortality rate represents a 10.8 percent decrease from the 2002 rate of 9.3. This is due in large part to a 15.6 percent decrease of infant deaths among blacks and other racial and ethnic minorities, which are down from 15.4 per 1,000 live births in 2002 to 13.0 in 2003.

- http://www.scdhec.gov/omh
- http://www.scdhec.gov/co/phsis/biostatistics

*S.C. Infant Mortality Rates by Race**

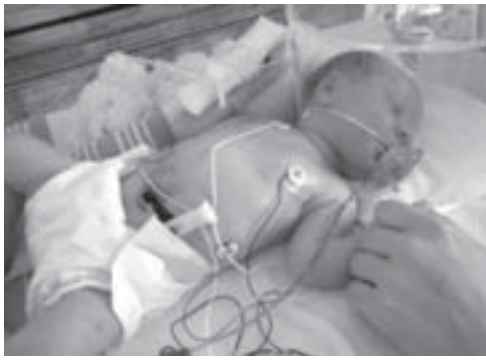


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	6.6	6.7	5.5	6.3	6.0	6.8	5.4	5.8	5.9	5.9
Black & Other	13.8	14.1	13.0	15.0	15.4	16.4	14.2	14.5	15.4	13.0
Total	9.4	9.4	8.3	9.5	9.5	10.3	8.7	8.9	9.3	8.3

*Race of Mother

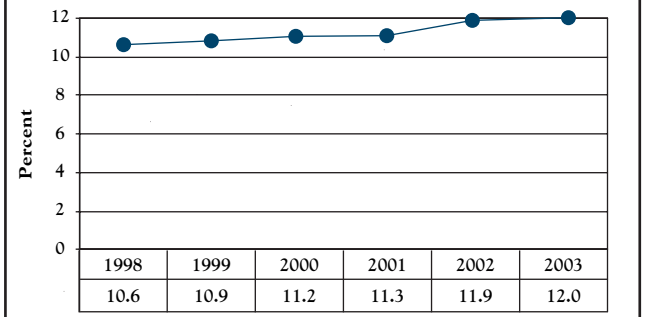
Data Source: SC DHEC Biostatistics

Prematurity Increasing



Babies born too early (before 37 weeks' gestation) are more likely to die early or suffer lifelong consequences, and cost society millions of dollars each year in additional hospitalization and medical care. In South Carolina, the percent of **premature babies** is increasing, rising to 12 percent in 2003 from 10.6 in 1998. The March of Dimes with DHEC as a strong partner has implemented a Premature Birth Campaign in South Carolina. The goals are to raise awareness of the problem of prematurity and to decrease the preterm birth rate in the state. A first step is to assure that all pregnant women know and understand the signs and symptoms of preterm labor. DHEC continues to promote delivery of the most high-risk infants in Level III hospitals, which have Neonatal Intensive Care Units and provide the best chance at a healthy life.

S.C. Live Births of Less Than 37 Weeks Gestation



1998	1999	2000	2001	2002	2003
10.6	10.9	11.2	11.3	11.9	12.0

Data Source: SC DHEC Biostatistics

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More Newborn Screening Tests Approved

Through newborn screening, all infants are tested at birth for certain disorders that cause mental retardation, abnormal growth and even death. In November 2004, DHEC approved and added tests for 24 rare, but potentially serious, disorders to the six tests already performed on newborns, making South Carolina's screening program one of the most comprehensive in the nation. Since the new test panel has been implemented, all newborns in South Carolina are tested for cystic fibrosis, biotinidase deficiency, congenital hypothyroidism, congenital adrenal hyperplasia, hemoglobinopathies like sickle cell disease, galactosemia and many other disorders caused by defects in the way the body uses fats and amino acids.

- http://www.scdhec.gov/mch
- Kathy Tomashitis: tomashkf@dhec.sc.gov • (803) 898-0619

Newborn Home Visits Lacking Staff

Postpartum newborn home visits to the Medicaid population in South Carolina can make a positive difference in outcomes for newborns and are a cost-effective element of health care for this population. Under this program, Medicaid pays for a post-hospital-discharge home visit to assess the environmental, social and medical needs of Medicaid-eligible infants as well as the family planning and other maternal health assessments and education needs of the mother. In home visits, nurses can identify infant problems early, such as poor weight gain, heart murmurs that develop after the first few days, or blood pressure problems in the mother. Nurses also can help the family find a medical home for the infant and stress the importance of well child care visits and immunizations. They also can assure that postpartum mothers receive their six weeks checkup and obtain family planning guidance. While the state target is for 90 percent of all Medicaid newborns discharged from a hospital to receive a newborn home visit within three days, in 2003, only about 51 percent—down from 69 percent in 2002—received a visit, primarily because of DHEC's critical nursing shortage.

- http://www.scdhec.gov/mch

Immunization of 2-year-Olds Remains High

DHEC administers the federal Vaccines For Children (VFC) Program under the name S.C. Vaccine Assurance For All Children (VAFAC) Immunization Partnership. Under this program, eligible children and adolescents can receive publicly funded vaccines in participating health care providers' offices. This program promotes a medical home for children by making disease-preventing vaccines available in the offices of enrolled private physicians' practices. Currently more than 600 practices are enrolled in the program, representing 99 percent of the pediatric practices in the state, many family medicine

practices, all community health centers and public health clinics, and most college and university health centers. DHEC's primary roles are to ensure an appropriate vaccine supply to enrolled providers, update immunization education of all health care providers, conduct vaccine preventable disease surveillance and epidemiology, and ensure immunization practice standards are being met to continually improve the immunization coverage levels of the state's children and adolescents. At 80.3 percent, South Carolina ranked third among U.S. states for estimated immunization coverage among children 19-35 months, according to the Centers for Disease Control and Prevention's National Immunization Survey. For more immunization information, see page 76.

- Jesse Greene: greeneje@dhec.sc.gov • (803) 898-0460
- http://www.scdhec.gov/immunization

Unintentional Injuries Leading Cause of Childhood Deaths

Unintentional injuries (commonly known as accidents) kill more children in South Carolina than any other cause of death. From 1993 through 2003, 2,781 children 19 years and under died in South Carolina from unintentional injuries. During that time period, the death rate was 23 per 100,000 children from birth to 19 years (see more child accidental death data, page 63).

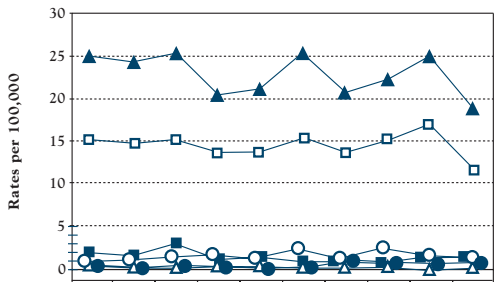
DHEC's Division of Injury and Violence Prevention coordinates efforts to reduce deaths from some of the top causes of unintentional injuries in children through the:

- Child Passenger Seat Program, which provides child passenger seat distribution and education to reduce unintentional death and injuries of young children;

- Traumatic Brain Surveillance Program, which provides useful population-based hospital discharge data to support the need and effectiveness of programs such as the Child Passenger Seat Program;
- Residential Fire Injury Prevention Program, which provides smoke alarm installation and fire safety education to the families of children under 5; and
- Child Fatality Advisory Committee, which provides annual statistical studies of the incidences and causes of child deaths in the state. This information is used to develop effective programs to reduce unintentional fatal injuries among children.

- http://www.scdhec.gov/injury
- Lou-Ann Carter: carterlp@dhec.sc.gov • (803) 898-0314

S.C. Unintentional Injuries Children 0-19



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MVC	15.2	14.9	15.2	13.2	13.5	15.6	13.7	15.2	17.2	11.8
Fire/Flame	2.2	1.8	3.1	1.3	1.5	1.0	1.0	0.7	1.5	1.4
Suffocation	1.0	1.2	1.6	1.9	1.4	2.5	1.4	2.5	1.9	1.4
Poisoning	0.4	0.2	0.4	0.2	0.1	0.2	1.0	0.8	0.6	0.7
Falls	0.5	0.2	0.1	0.3	0.4	0.2	0.2	0.3	0.0	0.2
All Unintentional	25.0	24.0	25.5	20.9	21.4	25.1	21.1	23.9	24.9	18.4

Data Source: SC DHEC Biostatistics

HEALTH

Ongoing Challenges, New Approaches

Families Need Medical, Dental Homes

All families should receive ongoing comprehensive care within **medical and dental homes** that are accessible, family-centered, continuous, coordinated, compassionate and culturally appropriate. Over the past few years, DHEC has been moving from providing primary and specialty medical care to developing partnerships with private/public medical and dental providers to provide those services to families. The state's medical and dental providers' ability to serve families had initially increased, but over the past few years, the number of partnerships has declined. The decline is due, in part, to DHEC losing staff needed to establish and support partnerships.

DHEC has developed partnerships with pediatricians, family practice physicians, obstetricians, specialty physicians, dentists and dental hygienists. Additional links have been made with community providers, schools and other organizations. These partnerships support primary medical providers by providing families and clients with complementary support services of public health staff in nursing, social work, nutrition and health education.

Additional Resources:

CareLine (information and referral to maternal and child health services)
- 1-800-868-0404

Healthy Infants
- www.modimes.org
- http://www.cdc.gov/nccdphp/drh/prams_sc.htm
- http://www.childbirth.org
- http://www.healthystartassoc.org

Teen Pregnancy Prevention
- http://www.freeteens.org

Prenatal Care
- http://www.healthystart.net

Access to Health Care
Child Health Insurance Program, Partners for Healthy Children
- 1-888-549-0820

American Academy of Pediatrics
- http://www.aap.org

Children's Defense Fund
- http://www.childrensdefense.org

Henry J. Kaiser Family Foundation
- http://www.kff.org

GOAL
Increase the Quality and Years of Healthy Life for Seniors

Preventive Health Key to Healthy Senior Population

Poor health is not an inevitable consequence of aging. By taking preventive steps, more South Carolinians in their 70s, 80s and 90s enjoy independent, active living with minimal health problems. Many older adults, however, still suffer unnecessarily from chronic and infectious diseases, injuries and functional limitations that are avoidable or can be delayed. Scientifically proven measures, such as increased physical activity, can improve health, reduce the impact of disease and delay disability and the need for long-term care. Public health professionals and citizens alike should continue promoting and adopting preventive steps so that more South Carolinians can enjoy healthy aging.

Senior Population Growing

Mature adults—those 65 and older—outpaced other age groups with a 33 percent growth rate between 1990 and 2000. In 2000, South Carolina boasted 485,300 residents 65 and older. The mature adult population has increased by approximately 100,000 each decade from 1950 to 1990 and by 90,900 from 1990 to 2000, representing an overall increase of 322 percent. An astonishing growth in the numbers of South Carolina residents over 85 parallels the national trend. In 1950, their numbers totaled 4,193. By 2000, there were 50,269, or 12 times the number in 1950. By the year 2025, estimates are that the number of people over 85 will reach 98,609, representing a 96 percent increase from 2000. By 2015, South Carolina's mature adult population is expected to make up one-third of the state's residents.

HEALTH

Long-Term Care Costly

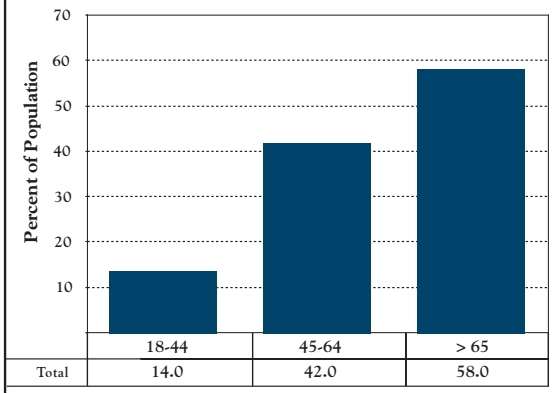
Preventive steps are important measures because the growing population of older adults places increased demands on the health care system. Seniors are the most frequent users of health care services in the state. Growth in the senior population needing long-term care and health care, the diminishing capacity of family members to provide long-term care, changes in medical technology and rising health care costs have resulted in increasing obligations for federal and state governments, as well as for families.

The cost of health care in institutions can be staggering. One year in a nursing home can cost from $35,000 to $45,000. Medicaid bears the major portion of these expenses. With the state's economy, future reimbursement costs for nursing homes will be a challenge. Research shows that measures such as physical activity can prevent or delay disability and the need for long-term care.

Arthritis The Leading Cause of Disability

Arthritis and other rheumatic conditions remain among the most common chronic conditions and are the leading cause of disability in the United States. Thirty percent of South Carolina adults have doctor-diagnosed arthritis. Of those with arthritis, 37 percent have activity limitation from chronic joint symptoms. While arthritis is not limited to seniors, the prevalence increases with age. Nearly 60 percent of South Carolina adults ages 65 and older have arthritis. Activity limitation is also higher among older age

Prevalence of Arthritis in S.C. by Age



	18-44	45-64	> 65
Total	14.0	42.0	58.0

Data Source: SC DHEC BRFSS 2 0

groups. Some forms of arthritis can be prevented. For example, weight control and injury prevention lower the risk for developing osteoarthritis. Physical activity can lower the risk of getting arthritis as well as improve the quality of life for those who have arthritis. For any form of arthritis, early diagnosis and appropriate management can reduce symptoms, lessen disability and improve quality of life.

S.C. Arthritis Prevention and Control Program

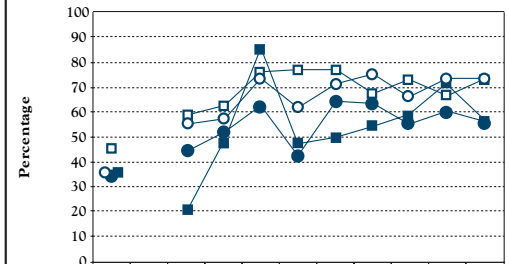
- http://www.scdhec.gov/arthritis
- Gwen Prestidge: prestidgf@scdhec.gov • (803) 898-0760

Influenza (the flu) and Pneumonia Take Toll on Seniors

Influenza (the flu) and pneumonia combined are the eighth leading cause of death in South Carolina, claiming 756 residents ages 65 and older in 2003. Nationally, about 36,000 deaths a year are attributed to flu. Ninety percent of deaths from the flu occur among people ages 65 and older. Medicare costs for influenza-related hospitalizations in the United States can reach $1 billion each year. A one-time dose of pneumonia vaccine and annual flu shots are the primary methods for preventing these diseases and their severe complications. For U.S. comparison, see page 76.

- http://www.scdhec.gov/immunization
- Jesse Greene: greeneje@dhec.sc.gov • (803) 898-0720

Prevalence of Influenza Vaccine (Within Past 12 Months) Among S.C. Residents Ages 65+

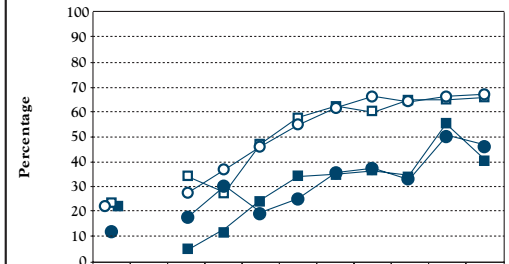


	1993	1994*	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Male	46.6		58.9	62.7	76.1	76.7	76.6	66.8	71.8	67.6	72.1
White Female	38.6		54.6	57.2	74.7	61.1	71.3	76.2	66.6	73.7	73.3
Black Male	38.6		20.0	49.0	85.5	48.8	50.0	53.9	59.3	71.2	57.4
Black Female	37.3		43.4	50.6	61.7	41.2	63.3	62.4	55.6	60.3	56.5

Data Source: SC DHEC BRFSS *Question not asked on 1994 survey

US rate=69.9 (2003)

Prevalence of Pneumonia Vaccine (ever) Among S.C. Residents Ages 65+



	1993	1994*	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Male	22.6		34.3	28.6	48.0	58.7	61.7	60.3	63.6	65.1	66.0
White Female	21.6		28.5	38.3	46.4	54.7	61.7	66.4	63.7	67.4	68.6
Black Male	21.7		5.6	12.0	24.1	34.0	35.8	38.6	33.7	56.7	40.9
Black Female	12.0		17.6	30.0	19.1	25.7	37.6	45.6	35.4	50.6	46.7

Data Source: SC DHEC BRFSS *Question not asked on 1994 survey

US rate=64.5 (2003)

HEALTH

Cardiovascular Disease, Diabetes Can Be Prevented

Cardiovascular disease and **diabetes** are serious chronic diseases. Cardiovascular disease is the leading cause of death in the nation and in South Carolina, and 65 percent of deaths in people with diabetes are caused by cardiovascular disease. Diabetes is more prevalent among older South Carolinians and African-Americans. South Carolina is ranked fourth in the nation for prevalence of diabetes and second in the nation for prevalence among African-Americans. Regardless of race or ethnicity, diabetes prevalence increases with age. In South Carolina, people over 55 years of age have the highest prevalence rates of diabetes in the state: 7 percent to 8 percent higher than those in the 45- to 64-year-old age group. In addition, deaths from diabetes and cardiovascular disease increase dramatically with age. People 65 and older have almost 4.5 times higher death rates from diabetes and almost 5.5 times higher death rates from cardiovascular disease than those in the 45- to 64-year-old age group.

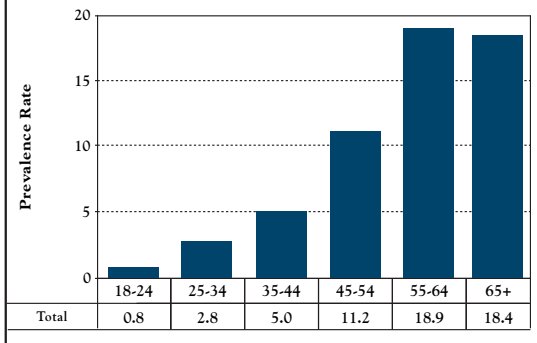
Both cardiovascular disease and Type 2 diabetes can be prevented or delayed by following simple guidelines, but translating these guidelines into action and behavior changes has proven very complex. For example, just a small weight loss of 7 percent can prevent or delay Type 2 diabetes in people at highest risk for the disease. For information on the racial disparities in diabetes and cardiovascular disease, see pages 9, 24 and 27. For information on the S.C. Diabetes Prevention and Control Program, see page 9.

S.C. Division of Cardiovascular Health
- http://www.scdhec.gov/cvh

S.C. Diabetes Prevention and Control Program
- http://www.scdhec.gov/diabetes

- Rhonda Hill: hillrl@dhec.sc.gov • (803) 545-4469

S.C. Diabetes Prevalence by Age Group



	18-24	25-34	35-44	45-54	55-64	65+
Total	0.8	2.8	5.0	11.2	18.9	18.4

Data Source: SC DHEC BRFSS (2003)

Cancer High Among Seniors

As age increases, the risk of cancer increases. For all types of cancer combined, the incidence rate is almost nine times higher for adults ages 65 and older than for the population ages 64 and younger. For specific types of cancer, this difference is even more marked: The rate of prostate cancer is almost 17 times higher among the older age group, the rate of lung cancer is almost 12 times higher, and the rate of colon cancer is 12 times higher. Ninety-two percent of colon cancers are diagnosed among adults 50 years and older.

Racial disparities among older adults are not marked except for **cervical** and **prostate cancer**. The incidence rate of cervical cancer among black women ages 65 and older is 37.3 per 100,000 women compared with 11.8 per 100,000 for white women of the same age group (three times higher). The incidence rate of prostate cancer among black men ages 65 and older is 1,500.6 per 100,000 compared with 854.5 per 100,000 for white men of the same age group (1.75 times higher). Likewise, the death rate is significantly higher for older black men than for white men. For all types of cancer combined, the incidence rates for blacks and whites ages 65 and older are essentially the same (2,103.6 per 100,000 versus 2,099.3 per 100,000, respectively). For more on racial disparities in cancer, see pages 25-26.

Early Detection Can Reduce Deaths from Breast Cancer Among Seniors

Among South Carolina seniors, the **breast cancer** death rate for women ages 65 and older is nearly 7.7 times higher than the rate for women under the age of 65. The death rate for black women ages 65 years and older is 12 percent higher than for white women in the same age group. However, among women under 65 years old, the breast cancer death rate for blacks is 83 percent higher than for white women. The incidence rate for female breast cancer is comparable for white and black women ages 65 and older.

Early detection through screening is the best way to reduce the risk of death from female breast cancer. Screening methods for early detection include self-breast exam, clinical breast exam and mammography. Clinical breast exams are part of annual exams. Starting at age 40, women should have mammograms every two years. Women should perform breast self-exams monthly. In addition to screening, improvements in lifestyle factors can help reduce the risk of female breast cancer.

- http://www.scdhec.gov/cancer
- Irene Prabhu Das: prabhudi@dhec.sc.gov • (803) 545-4103

Falls Leading Cause of Injury Among Seniors

Falls are the number one cause of injury among seniors. Other **unintentional injuries** and injuries from **motor vehicle crashes** are second and third for this population. Among older adults, falls are the leading cause of injury deaths and the most common cause of nonfatal injuries and hospital admissions for trauma. Risk factors related to falls in the senior population are lower body weakness, problems with walking and balance and inappropriate management of medication. Falls can be prevented through regular physical activity to increase lower body strength and improve balance. Another fall prevention method is for doctors and pharmacists to review individuals' prescriptions and over-the-counter medications to reduce side effects and interactions.

Division of Injury and Violence Prevention

- http://www.scdhec.gov/injury
- Lou-Ann Carter: carterlp@dhec.sc.gov • (803) 898-0314

HEALTH

Senior Population at Risk for Suicide

In the United States, **suicide** is the 11th leading cause of death across all age groups. However, according to the 2002 Institute of Medicine Report, "Reducing Suicide; A National Imperative," men 75 years of age and older have one of the highest suicide rates among all age groups. Men account for four out of five completed suicides among those older than 65.

Seniors are far more likely to complete suicide attempts than are younger age groups. In addition to overt suicide attempts, the elderly often exhibit subtle behaviors, such as a refusal to eat or drink and noncompliance with medical treatment. Depression, serious illness, bereavement and social isolation are risk factors for suicide among the elderly population. The effect of spousal loss is most pronounced in older males.

Ongoing Challenges, New Approaches

Healthy Communities Lead to Healthy Aging

Communities can assist in healthy aging by making environments safe, more activity-based and accessible to seniors. Planning should include creating communities with bike paths, sidewalks and neighborhood grocery stores. Safer communities and mass transportation are central issues for our aging population because they provide basic access to services that younger South Carolinians take for granted.

Communities can assist their aging population by assuring that supports and services are available to promote healthy behaviors and health improvements. Senior citizens should be involved in any efforts to conduct community planning that promotes increasing activity levels and independence for older residents. Social supports, such as volunteer opportunities, also provide a way for seniors to contribute to their communities while others gain from their knowledge and experience. Initiatives should focus on enabling senior residents to age in place while maintaining the quality and years of their lives. Safe, senior-focused housing is needed and can be encouraged by working with developers to assure larger door openings, allowing wheelchair accessibility in homes and showers. Adaptations are easily made for door handles, and ramps allow quick movement in the event of a fire or health emergency.

Institutional Alternatives Desired

DHEC's **Health Regulations** deputy area monitors the health and safety of residents and patients of health care facilities and services throughout South Carolina, including adult day care centers, nursing homes, home health agencies and community residential care facilities. More than 40 nursing homes in South Carolina are implementing elder center homelike initiatives. Many facilities that have implemented these initiatives have experienced a reduction in staff turnover rates, use of medication and infection rates.



As South Carolina's aging population continues to increase and, consequently, the need for long-term care services increases, innovative models of care to help keep seniors in their homes and communities are needed. One such model is **PACE,** the Program of All-Inclusive Care for the Elderly. PACE takes many familiar elements of the traditional health care system and reorganizes them in a way that makes sense to families, health care providers and the government programs and others that pay for care.

- http://www.scdhec.gov/hr/licen/hrtypfac.htm

Additional resources:

Lt. Governor's Office on Aging
- http://www.state.sc.us/ltgov/aging/index.html
- (803) 734-9900

Health care facilities licensed by DHEC Health Regulations
- http://www.scdhec.gov/hr/licen/hrtypfac.htm

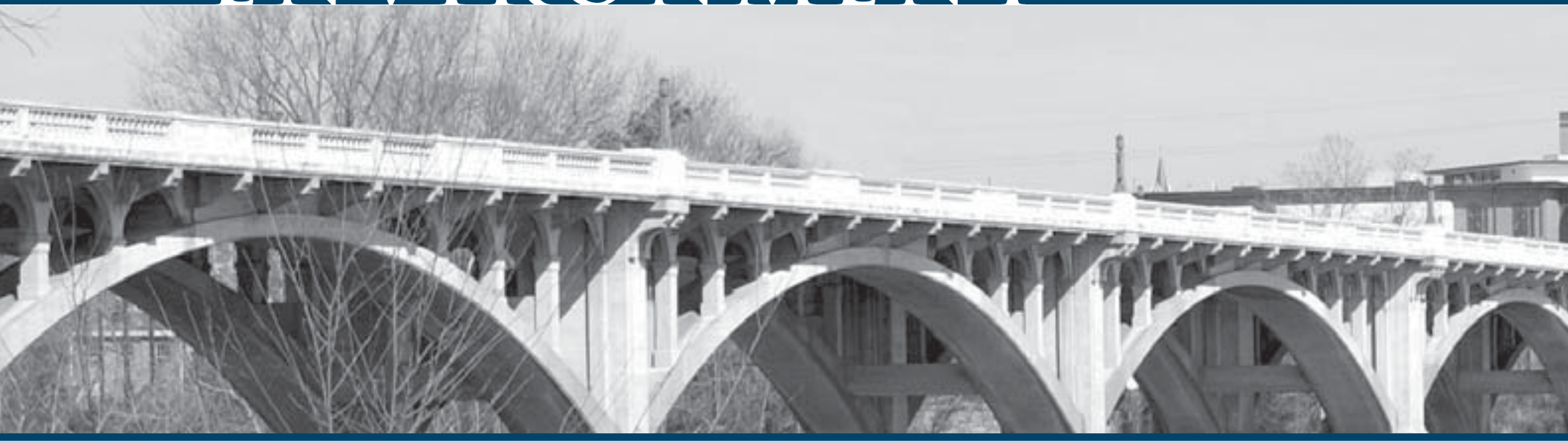
Eden Alternative
- http://www.edenalt.com

The National Council on Aging
- http://www.ncoa.org

AARP
- http://www.aarp.org

The American Cancer Society
- http://www.cancer.org
- (800) 227-2345

CHAPTER 3
ENVIRONMENT



Protect, Enhance Coastal Resources; Ensure Proper Management and Access

Storms Batter Beaches • Council on Coastal Futures
Vegetated Buffer Education • Alternative Development
Partnership Water Monitoring
Special Area Management Plans

Ongoing Challenges, New Approaches

Surf Monitoring

Protect, Continually Improve and Restore the Environment

EPA and Fine Particulate Designations
Governor's Water Law Review Report
Assessment Methods of State Waters
Total Maximum Daily Load • Whole Effluent Toxicity
Compliance Assistance Commitment

Ongoing Challenges, New Approaches

Isolated Wetlands Regulations
Pay-for-Performance Tank Cleanups • Improving Air Quality

Protection of the environment includes evaluating and assessing current conditions, identifying and understanding the current and long-term impacts of our activities, and having the procedures in place to minimize those impacts. Our understanding of what is needed to minimize impact has grown beyond smokestack and waste pipe pollution to include mobile sources, nonpoint sources and remote and indirect sources of pollution. One critical environment the state works to protect lies in the eight coastal counties, where more than 1 million people live. In this area, the rate of land development is growing more than six times faster than the population, and by 2010 almost one-third of the state's population will live in the coastal zone. In addition, the tropical storms of 2004 reminded us that the state must be proactive in protecting the coast and the coastal populations. This year the state did take several steps to promote progressive policies and work with communities to provide examples of how to better develop the coast while still allowing public use and access to its resources. Protecting, improving and restoring the environment also require ensuring that rules, regulations and best practices are followed and, when possible, going beyond the requirements to do better.

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GOAL
Protect, Enhance Coastal Resources, Ensure Proper Management and Access

2004 Storms Batter Beaches

Five tropical storm systems battered South Carolina's beaches in the summer and fall of 2004, causing some of the worst erosion since Hurricane Hugo in 1989. It was the first year since 1893 that the centers of four tropical systems crossed into South Carolina. Hurricane Charley and Tropical Storm Gaston came ashore within miles of each other in Charleston County in August, and the remnants of Hurricane Jeanne and Hurricane Bonnie passed through the state. The fringes of Hurricanes Frances and Ivan produced heavy rain and tornadoes, even though the center of neither storm passed through the state. Charley, Frances, Gaston and Jeanne caused heavy erosion, as did Hurricane Alex, which passed off the South Carolina coast.

As a result of the storms, Hunting Island State Park lost about 35 feet of sand and the dune at the north end of Folly Beach eroded by 40 feet. One trail at Folly Beach now ends with a 5-foot ledge into the ocean. Farther up, the Grand Strand fared much better. A **renourishment** project in the late 1990s helped protect Myrtle Beach. The state will begin a beach renourishment project at Hunting Island State Park to protect the beach from future damage. The plan had been to wait for federal matching funds – the project was estimated four years ago to cost at least $10 million – but the U.S. Army Corps of Engineers has put all renourishment dollars on hold because of the war on terrorism. The state set aside $5 million for the renourishment in this year's budget to go with $3.2 million previously designated for the project. Planning and permitting will take nearly a year, with renourishment intended to begin by January 2006.

http://www.scdhec.gov/ocrm

Council on Coastal Futures Issues Final Report

In May 2004, the **Council on Coastal Futures** issued 18 recommendations to address stormwater management, freshwater wetlands, assistance to local governments on managing coastal resources, improvements to the appeals process, quality of life and growth management issues, and improved administrative processes. The council includes a range of environmental, scientific, government and business representatives. The DHEC board

appointed the 19-member council to address issues facing coastal South Carolina and make recommendations for improving coastal management.

The council met with citizens and deliberated over issues directly related to the health of the coast. The final review achieved the objective of broad and meaningful participation and dialogue by the many interested individuals and organizations. However, the recommendations provided are only a blueprint for continued discussion. The stakeholders need to be involved to design strategic and science-based plans for most recommendations outlined within the report. The report is a vital step in educating the public on the coastal environment.

The common thread found throughout the study is the importance of prevention and effective and comprehensive planning. Additionally, there is a critical need for objectively evaluated scientific information to guide the management of the coast. Better planning and better science serve as the foundation for most of the council's 18 recommendations, but the long-term, sustainable health of the coast can be achieved only by full commitment from all segments of the community.

Vegetated Buffer Education Continues

DHEC's Office of Ocean and Coastal Resource Management (OCRM) works with citizens and local government officials to establish **vegetated buffers** along waterways in several places throughout the coastal zone of South Carolina. These buffers are preserved to protect the waterways. More people now recognize the importance of buffers for reducing stormwater volume and cleaning the remaining stormwater. They protect against flood damage by slowing and infiltrating the stormwater. The deep roots of trees and plants secure the banks of waterways and prevent erosion. Buffers also serve to preserve habitat.

Several buffer ordinances for new developments have been in place for a few years, including in the city of Charleston and the Town of Mount Pleasant. OCRM has a voluntary citizen participation program called Backyard Buffers, which has helped spread the word on the importance of buffers. In addition, the Murrells Inlet Special Area Management Plan is informing local landowners on how they can construct buffers and protect the inlet's water quality.

http://www.scdhec.gov/ocrm

Alternative Development Practices Urged

In June 2004, OCRM's Planning Division sponsored a workshop, Alternative Development Options, for local developers, government officials, real estate agents, planners, architects, environmentalists and interested citizens on the advantages of alternative development practices. The workshop covered the philosophies of conservation subdivision design and new urbanism, and provided information about existing developments that have followed these philosophies in their design and construction. The workshop featured Randall Arendt, a nationally renowned expert on **alternative development practices** and creator of the concept of conservation subdivision design, which clusters homes and businesses on one section of a development while preserving a large percentage of remaining property in its natural state. Workshop attendees gave an overwhelmingly positive response to Arendt's recommendations and showed an interest in putting these practices into action.

Other speakers talked about their "new urbanist" projects in South Carolina. New urbanism mimics the design philosophies of the early 20th century as

ENVIRONMENT

an alternative to current sprawling suburban development. Neighborhoods are constructed to be more walkable, with a mixture of commercial, office, civic and residential uses found throughout a development. It contrasts with conventional development, where uses are separated and cars are the only option for getting to schools, parks and shops. Clustering higher-density residential sections nearer to commercial and community facilities makes small commercial centers more viable, as the layout encourages pedestrian traffic to stores. Clustering increases the ability of a school district to construct smaller neighborhood schools that can be accessed by foot or bicycle, and several small "pocket parks" can work well in a walkable neighborhood. The purpose of promoting these innovative land development techniques is to give developers environmentally friendly options to conventional subdivision design. Currently, most local ordinances prohibit or restrict these types of developments. DHEC's efforts include educating local government officials and developers on the positive results of these alternative development practices.

Partnership Allows for More Monitoring

DHEC's collaborative with the state Department of Natural Resources' S.C. **Estuarine and Coastal Assessment Program** (SCECAP) expands DHEC's **Ambient Surface Water Quality Monitoring Network**. SCECAP increases the number of sites monitored in the coastal zone each year and adds more environmental and biological measures than are typically collected in DHEC's monitoring network. The collaborative effort also includes several federal partners such as the U.S. Environmental Protection Agency (EPA), which provides much of the funding through the National Coastal Assessment Program and the National Oceanic and Atmospheric Administration (NOAA). NOAA also provides analytical services related to sediment and tissue contaminants.

SAMP Projects Show Promise of Coastal Protection

DHEC continues to work toward coastal wetland and habitat protection. Currently there are two **special area management plans** (SAMPs) under way and one just beginning that further this aim.

The Upper Cooper River Corridor Study was completed in 2004 and explores ways to address habitat succession, the change in vegetation caused by the Santee-Cooper Rediversion Project. This project lowered water levels in the Cooper River, which is resulting in a dramatic change throughout the system, particularly in the formerly impounded areas. There is concern that this habitat succession will cause the loss of significant and unique habitats. A SAMP stakeholder committee is producing a report and list of recommendations on how to address this issue.

http://www.scdhec.gov/ocrm

The Murrells Inlet SAMP is working on Georgetown and Horry counties to protect the inlet's water quality. Urbanization is threatening to degrade the inlet's wildlife resources, and the SAMP is exploring ways to lessen the impact and to educate local citizens on steps they can take to protect water quality. Four demonstration projects are planned or under way that will introduce better stormwater controls and serve as demonstrations of what can be done. One demonstration project involving ultraviolet radiation to kill bacteria will be the first time this particular stormwater control method has been implemented in a saltwater environment. If it works as planned, it may have far-reaching consequences on controlling bacteria contamination from stormwater ponds and from beachfront outfall pipes.

http://www.scdhec.gov/ocrm

The Filbin Creek Project attempts to restore the habitat of a stream on the §303(d) impaired waters list. Filbin Creek has been channeled and its wetlands cut off from receiving stream flows. This SAMP will attempt to restore some of those wetlands to their original form and use them to filter stormwater before it is discharged into the creek and, ultimately, the Cooper River.

Ongoing Challenges, New Approaches

Surf Monitoring Expanded

In an effort to ensure the public's health while swimming along South Carolina's nearly 200 miles of coastline, 2,799 surf water samples were collected and analyzed in calendar year 2004. Some sampling occurred as part of a continuing grant program that allowed municipalities to aid in sampling and notification efforts. The sampling done by Coastal Carolina University through this program allowed for more frequent sampling in some areas than would have otherwise been possible with limited staff resources. A new database tracks surf samples and advisories and allows for electronic transfer of data from DHEC's system directly into the EPA's database.

Additional resources:

U.S. Army Corps of Engineers Charleston District
http://www.sac.usace.army.mil/

S.C. Estuarine and Coastal Assessment Program
http://www.dnr.state.sc.us/marine/scecap/

National Coastal Assessment Program
http://www.epa.gov/emap/nca/

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GOAL
Protect, Continually Improve and Restore the Environment

EPA Makes Fine Particulate Designations

In late 2004, EPA designated all of Greenville, Anderson and Spartanburg counties as unclassifiable for attainment with the federal standard for **particulate matter** until additional data has been collected and analyzed. Particulate matter, or PM, is the term for particles found in the air, including dust, dirt, soot, smoke and liquid droplets.

The Fine Particulate Matter National Ambient Air Quality Standard was announced in 1997. After installation of samplers and collection of necessary monitoring data, the Clean Air Act requires that each state submit to EPA its recommended designation of the areas of the state meeting the standard (attainment/unclassifiable) or having concentrations above the standard (nonattaiment). In February 2004, DHEC submitted a recommendation of attainment for the entire state based on complete data for the years 2001, 2002 and 2003.

In June 2004, however, EPA notified South Carolina of its intent to make modifications to the state's recommendation of attainment. EPA said that while the Greenville air sampler had not been operating for three calendar years, it had the potential to violate the standard. DHEC has been working with local government, community representatives and EPA to identify sources impacting the site, reduce emissions at identified sources and define the true impacted area. Additional monitoring has been started to help better understand the sources of the particulate in downtown Greenville.

In addition to the potential health effects, fine particulate is the primary cause of haze. DHEC continues to work with 10 Southeastern states to reduce the impacts of fine particulate on the visibility in Class I areas, those areas identified by Congress as requiring protection from visibility impairment. The VISTAS (Visibility Improvement State and Tribal Association of the Southeast) effort is directed at reducing the visibility impacts of fine particulate and improving visibility in these areas.

- http://www.vistas-sesarm.org/
- Renee Shealy: shealyrg@dhec.sc.gov • (803) 898-4299

Governor's Water Law Review Report Urges Legislation

In January 2004, the **Governor's Water Law Review Committee** released its findings and recommendations on initiatives needed to preserve, maintain and manage the water resources of the state to ensure available and affordable quantities and qualities of water for present and future multiple uses. Elizabeth Hagood, DHEC board chair, served on the governor's committee, and DHEC staff provided technical support. The recommendations suggest legislation is needed to:

- allow the state to intervene in private water disputes so that the public interest is represented;
- establish a minimum amount of water to be maintained in streams to support all uses; and
- issue permits for surface water withdrawals (The amount of surface water that can be withdrawn is currently unregulated.).

The report also addresses interactions with Georgia and North Carolina. South Carolina and Georgia share the Savannah River as an important supply of drinking water and a critical part of the municipal and industrial wastewater disposal process. Saltwater intrusion in South Carolina from significant groundwater withdrawals from the Upper Floridan aquifer around Savannah is a concern. The committee recommended that South Carolina and Georgia, along with the federal government, enter into negotiations to establish an equitable share of the Savannah River Basin's resources in a binding River Basin Compact.

Low Impact Development a Natural Alternative

Low impact development (LID) uses natural and engineered infiltration and storage techniques to control stormwater where it is generated. The objective is to disperse stormwater controls *uniformly* across a site to minimize runoff. Hydrologic and environmental functions are maintained instead of altered, which is the strategy with conventional stormwater management. Traditional end-of-pipe systems direct all stormwater to storm drains to remove it from a site as quickly as possible, which can have detrimental effects on waterways and the groundwater supply. LID helps maintain the water balance on site.

LID achieves stormwater retention by using distributed controls. The retention areas are designed into the open space or below existing infrastructure, such as parking lots. Design configurations depend less on inlets, pipes and ponds and greatly reduce maintenance requirements compared with conventional engineered stormwater controls. Some examples of LID technologies include low-tech engineered systems that store stormwater and slowly infiltrate it, such as subsurface collection facilities under parking lots, and modifications to infrastructure to decrease the amount of impervious surfaces, such as narrower curbless and gutterless streets. Other technologies involve using pervious materials, such as porous concrete and asphalt for parking lots, driveways and low-volume roads, and engineered systems that filter stormwater from roads and parking lots, such as bioretention cells, filter strips and tree box filters.

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The challenges are different in northern South Carolina. North Carolina is the upstream user of water entering South Carolina in the Yadkin/Pee Dee Basin and the Catawba/Wateree Basin. The quality and quantity of water entering the state are affected by how North Carolina uses the water before it enters South Carolina. The report recommends bi-state commissions to address and advise on water issues of mutual interest.

http://www.scwaterlaw.sc.gov/

Several methods used to assess state waters

With approximately 30,000 miles of streams and rivers, more than 407,000 acres of lakes, and more than 400 square miles of estuarine waters in South Carolina, assessing water quality is a challenge. Monitoring existing water conditions, or *ambient* monitoring, provides the data needed to adequately assess the state's water quality. DHEC assesses the quality of the aquatic environment so water protection priorities can be set and reported to the public. Assessments also show whether control measures are effective. Water quality is monitored using statewide probability-based surveys, routine long-term ambient monitoring, watershed water quality management and special studies.

S.C. Watersheds

Data Source: SC DHEC Bureau of Water

Overall water quality conditions in rivers and streams, lakes and coastal estuaries are assessed through statewide probability-based surveys. A probability-based survey uses data from a small set of carefully selected sampling sites to make statistically valid statements about the overall condition of the waterbody. A new set of sites is selected every year, allowing for many waterbodies to be sampled over time and increasing the accuracy of the assessment results.

Long-term ambient monitoring occurs through the **Ambient Surface Water Quality Monitoring Network,** roughly 350 fixed sites that are sampled year after year. These sites represent a variety of waterbody types and sizes, drainage area sizes and mix of land-use characteristics across a variety of geophysical settings. The data helps determine if existing water quality can support desired water uses and if appropriate standards have been set. Data collected by this network are used to develop water quality standards that protect these designated uses and establish waterbody-specific use classifications. Ambient data

provide National Pollutant Discharge Elimination System permit writers an indication of the limits on wastewater discharges needed to protect each waterbody. These data are also used to study changes in specific water quality indicators at sites over time.

Also each year, a large portion of DHEC's monitoring effort focuses on a different major basin area in the form of Watershed Water Quality Management Sites. Watershed stations supplement the Ambient Surface Water Quality Monitoring Network, provide more complete and representative coverage within the target basins, and help identify waterbodies in need of additional control measures.

All of these data taken together form the basis of the biennial **§303(d)** list of impaired waters and §305(b) report on overall statewide conditions required by the federal Clean Water Act. Through the assessment process, priority waterbodies (those not meeting designated use goals) may be identified for special study. Also, those waterbodies with water quality exceeding designated use classifications and standards may be identified and upgraded to new use classifications.

Special studies are conducted to investigate problems identified through monitoring and assessment and to determine the causes when designated uses are not supported. They also are used to assess conditions of waterbodies not included in the Ambient Surface Water Quality Monitoring Network.

http://www.scdhec.gov/water

TMDLs Return Waterbodies to Standards

DHEC reviews and revises its water quality standards every three years as required by the Clean Water Act. The federal law also requires all states to compile a list every two years of waters not meeting water quality standards.

Portions of streams, rivers, lakes and other waterways are placed on this **§303(d)** list of impaired waters when five years of monitoring data indicate that state water quality standards are not being met. Waters may be listed as impaired for a variety of reasons, often the result of local and upstream land use. The impact of runoff from developed areas or agricultural uses can be significant.

DHEC must develop a **Total Maximum Daily Load** (TMDL) for each lake, river or stream on the §303(d) list. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive from all sources and still remain healthy. A TMDL specifies the pollutant reductions needed to meet water quality standards. All pollutant sources in the watershed receive allocations that reflect these reductions. Reductions in pollutants from point sources – discharge from a pipe, for example – are achieved through enforceable permit requirements. Reductions in pollutants from nonpoint sources, such as runoff, take place as a result of voluntary local action. Grants are available through DHEC for voluntary water quality improvement projects. EPA must approve all TMDLs, and approved TMDLs are posted on DHEC's Web site.

http://www.scdhec.gov/water

ENVIRONMENT

Whole Effluent Toxicity Tests on Hold

Analyses can provide concentrations that indicate the potential toxic effects of each industrial and municipal waste pollutant, but individual measurements cannot address the total effects of waste streams with different concentrations and pollutants from day to day. Whole Effluent Toxicity (WET) testing addresses this uncertainty. The WET test measures the toxic effects of an effluent on a test organism and compares it to the same test organism in water that contains no effluent. This provides a measure of the toxic effects of the waste stream as a whole and gives a measurement of combined effects of multiple pollutants at varied concentrations that no other measure accomplishes. By using WET tests, DHEC can demonstrate that the state's waters are free from harmful substances or wastes in concentrations or combinations that interfere with the waterbodies' uses.

The 2004 S.C. Aquatic Life Protection Act limits the use of WET testing until DHEC concludes extensive studies on native organisms. This means that DHEC is unable to place WET limits on discharge permits. As a result of the act, EPA could object to state-issued permits and begin issuing their own as well as disapproving South Carolina's water quality standards program.

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Compliance Assistance Commitment Renewed

Compliance assistance is part of DHEC's commitment to customer service and is provided as part of a continuum of activities that includes public education and outreach, permitting and compliance and enforcement. Beyond confirming whether regulated entities are complying with environmental requirements using inspections, sampling, testing and review of reports and records, compliance assistance can help the regulated community understand and meet its environmental obligations before there is a problem. Compliance assistance is not a substitute for enforcement and is not intended to prolong a timely and appropriate return to compliance by a regulated entity, but is a proactive way to help avoid negative environmental impacts and the enforcement actions that may result.

Compliance assistance includes on-site assistance, workshops, conferences and training, telephone assistance, booklets, fact sheets and brochures, Web-based information and special mailings. In the last year, compliance assistance has been supplied as everything from workshops explaining the new maximum achievable control technology standards and multimedia workshops targeted for small specialty chemical companies, to environmental "Circuit Riders" helping small municipalities with something as simple as a notification of an upcoming permit expiration.

DHEC also partners with other organizations to develop and deliver compliance assistance. Assistance is available through 12 EQC district offices and through the nonregulatory Center for Waste Minimization, the Small Business Assistance Program, and each of the EQC program areas. For more on compliance assistance, see pages 17 and 21.

Claire Prince: princech@dhec.sc.gov

Ongoing Challenges, New Approaches

Isolated Wetlands Regulations in Limbo

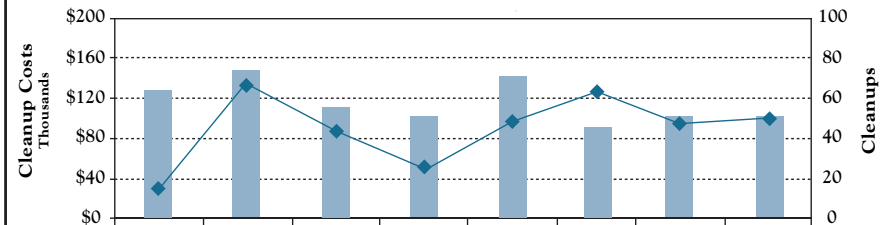
As a result of a U.S. Supreme Court decision that federal agencies do not have jurisdiction over isolated waters, DHEC's opportunity to review activities that affect these important wetlands has been removed. DHEC does have the legal authority to regulate activities in **wetlands** because they are defined as waters of the state by the S.C. Pollution Control Act, but since there is currently no permitting program in place specifically for wetlands, thousands of acres of isolated wetlands in South Carolina are unprotected. DHEC proposed a regulation in 2004 that would provide a permitting program to regulate fill (dirt and other substances) in waters, including isolated wetlands. This approach would have restored DHEC's ability to regulate those waters. This effort was not successful. Over the past year, DHEC has held town and regional meetings to gather input on issues stakeholders think should be addressed in any wetlands legislation or regulation proposed in South Carolina. It has not been determined whether any new legislation or regulation will be proposed to protect these valuable resources.

http://www.scdhec.gov/water/

Pay-for-Performance Tank Cleanups Saving Money

Performance-based contracting for cleaning up underground storage tank leaks continues to have a positive impact. Before 1997, the amount of contamination removal from leaking tanks was not meeting expectations, and the cost for time and material cleanups averaged $325,000. In 1997, DHEC modified its procurement process to allow competitive bidding and paying for performance. Currently, competitive bids are evaluated to ensure the cleanup method can be permitted and the estimated completion time is protective of human health and the environment. When both of these conditions are met, the lowest bid is the amount reimbursed by the state fund, and payment is not made until key milestones are met. Since implementing the competitive bid pay-for-performance method, the average cost of an active UST cleanup has

Underground Storage Tanks Cleanups vs. Costs



	1997	1998	1999	2000	2001	2002	2003	2004*
Average Cleanup Cost	$128,396	$154,880	$112,404	$103,411	$138,758	$84,187	$102,208	$102,520
Cleanups	16	68	43	25	47	62	48	52

Data Source: SC DHEC UST

*Through October 30, 2004

ENVIRONMENT

been $115,845, a 64 percent reduction over time and materials contracting. A total of $75.3 million in savings has been realized since 1997. Further, the closure rate for cases needing cleanup has improved, and the mass reduction on current cleanup projects has been outstanding. Currently, 64 percent of all pay-for-performance cleanups have reached a 75 percent or higher removal of contamination.

The program is also taking steps toward quicker completion of existing and upcoming cleanups. A recent division reorganization, which allows staff to increase the focus on cleanup projects, is already having a positive impact.

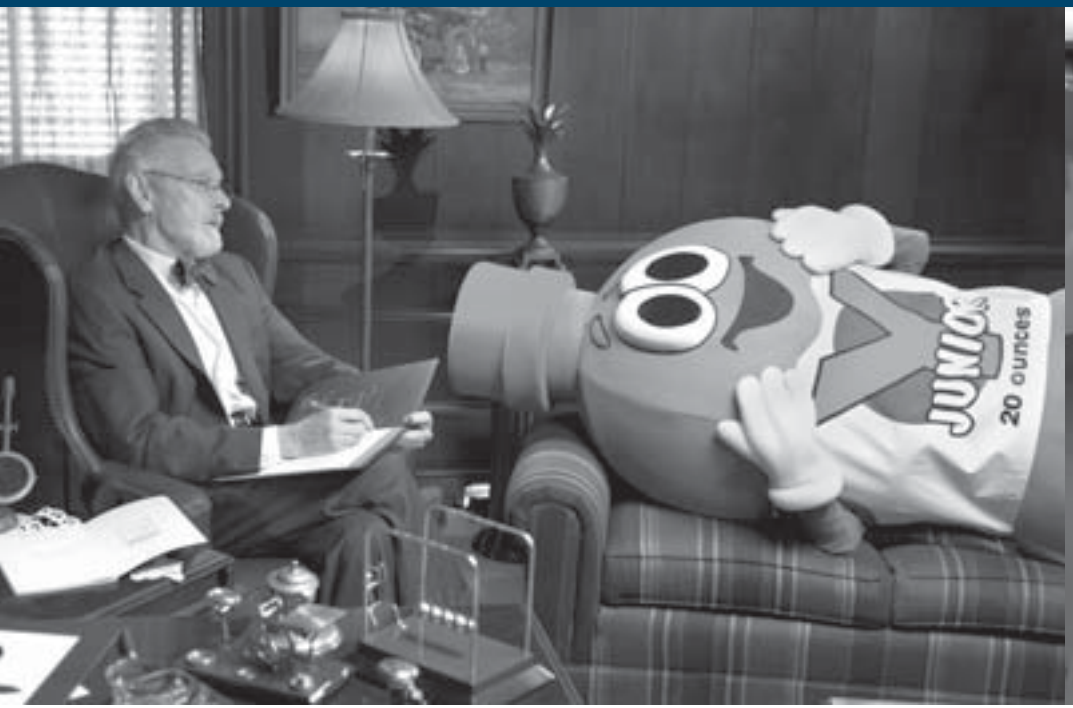
Commuter Changes Can Improve Air Quality

As South Carolina's population grows, more vehicles are on the roads each year, and data shows the miles driven increase faster than the population. The exhaust from these cars, buses and trucks is a large contributor to air pollution both locally and statewide. To reduce the impact of vehicles, DHEC promotes and participates in several projects, including:

- **SmartRide:** The SmartRide commuter buses cranked back up in June 2004, reducing the number of vehicles on the highways each day and the emissions that cause air pollution. The SmartRide Research Project began in October 2003, when the S.C. Department of Transportation (DOT) began studying the feasibility of a commuter mass transit system in the Columbia Metropolitan Area. As a result of the routes in and out of Columbia from Newberry, Irmo, Lexington and Lugoff, commuters saved fuel and time, reduced the stress of driving, and enjoyed an overall increase in "well-being." Traffic congestion lessened, improving highway safety. Fewer air pollutants were released. DHEC is assisting S.C. DOT in calculating emissions reductions from this pilot project. Currently, SmartRide offers round-trip routes for Newberry-Little Mountain-Chapin and Camden-Lugoff. Fares range from $15-$20 per week depending on the route. Based on the fares subsidy in place, the SmartRide project will continue into the summer of 2005. Project partners include S.C. DOT, Central Midlands Regional Transit Authority and Santee Wateree Regional Transportation Authority. DHEC is supporting this initiative through promotional efforts.

  - http://www.dot.state.sc.us/getting/smartride/smartride.html
  - Henry Phillips: phillimh@dhec.sc.gov • (803) 898-3260

- **Take A Break From The Exhaust:** For the past three years, DHEC's Bureau of Air Quality staff has participated in an alternative commute pilot project called "Take A Break From The Exhaust" (TABFTE). In 2004, the TABFTE program expanded inside and outside the agency. DHEC's Bureau of Water implemented TABFTE, and Square D Corp. became the first non-DHEC group to participate. Bureau of Air Quality staff met with Square D and Bureau of Water personnel to demonstrate



how to use the TABFTE software and provide ideas and promotional items to help encourage participation. Because the TABFTE commuting activity tracking is a Web-based application, groups in other states and organizations can participate if they have Internet capability. In 2003, TABFTE won the Governor's Pollution Prevention Award for State Agencies.

- http://www.scdhec.gov/baq
- Jack Porter: porterje@dhec.sc.gov • (803) 898-3829

Additional resources:

U.S. Environmental Protection Agency
- http://www.epa.gov

Federal Energy Regulatory Commission
- http://www.ferc.gov

Association of State Wetlands Managers
- http://www.aswm.org/fwp/swancc/

IMPROVING THE DHEC ORGANIZATION

GOAL
Improve Organizational Capacity and Quality

The emergence of many new issues and threats, such as E-coli, West Nile virus, SARs and, most recently, homeland security, point to the need for a well-prepared public health system and work force. Public health workers and programs are critical resources for meeting present and future threats. DHEC works to improve and support public health services and enhance the state's capability to anticipate, recognize, prevent and respond to environmental and public health threats and improve access to technology and other information systems.

Building the Core of Public Health Professionals

An essential function of public health is to assure a competent work force for public health and environmental protection and management. DHEC employs a variety of professional staff to perform public health functions, including information technologists, nurses, engineers, nutritionists, health educators, environmental health specialists and others. Prevention of disease and enforcement of regulations to protect public health require a competent, experienced work force. Training and retention of staff is a key issue for DHEC. Competition with the private sector puts the agency at a disadvantage in recruiting for high-demand, hard to-fill positions for which current salary levels are well below the private sector, other Southeastern states and other state agencies. Funding limitations and unfilled vacant positions also put staff in the position of taking on additional duties without an associated pay increase. Because of fiscal constraints, DHEC operated in 2004 with about 900 fewer employees, including a 34 percent vacancy rate among nurses. DHEC continues to seek improvements in work force competence through training and development of position competencies and career paths.

Training Needs Assessment Provides for Public Health Preparedness, Work Force Development

A first-ever Competency-Based Training Needs Assessment surveying DHEC Health Services staff provided the framework for continued work force improvement and public health preparedness during 2004. The more than 2,400 responses to the survey provided the blueprint for staff training and competency development. A needs assessment was also conducted for hospitals and their staff, with more than 1,800 responses. Based on these assessments, several different public health preparedness trainings were conducted over the past year. The Academy of Public Health Preparedness was established with the University of South Carolina (USC) Norman J. Arnold School of Public Health, and key DHEC staff attended training along with community partners, for a total of 13 teams with 98 participants.

Public Health Consortium Joins DHEC, USC

To strengthen the infrastructure of public health, DHEC and the USC Norman J. Arnold School of Public Health have formed the Public Health Consortium. Comprised of faculty and leaders from the School of Public

Health and managers and leaders from DHEC, work groups have developed plans to address work force development, research, joint appointments and standards. Community advocacy and data management are being addressed through a six-county collaborative with USC and the S.C. Turning Point Project funded by the Robert Wood Johnson Foundation. This past year, training on finding, correctly interpreting and delivering public health data to community groups and the media was provided to health department staff and community leaders, along with training in MAPP (Mobilizing for Action through Planning and Partnerships).

Training Continues for Public Health Managers

Because of retirement options available to state employees, DHEC expects to lose some 350 staff members, many of them in management, in the next few years. In anticipation, DHEC's Environmental Quality Control deputy area launched a **Capacity Building** pilot program designed to develop leaders and prepare for the impending departure of retiring employees. By the end of 2004, 120 employees had begun participation in the project. The state Budget and Control Board's Office of Human Resources recognized DHEC for the successful pilot with the first Excellence in Human Resources award. Building on the pilot's success, the Office of Quality Management and the Office of Personnel Services plan to extend this program to all areas in the agency.

Leadership/Management Opportunities Enhanced

Leadership and management skills are strengthened by having selected agency staff complete structured leadership and management curricula. The agency has 250 staff who have graduated from the Management Academy of Public Health and 23 staff who are currently enrolled. Twenty-nine staff members have graduated from the Southeastern Public Health Leadership Institute, and 14 are currently enrolled. Both programs are based at the University of North Carolina. The agency supports annual participation in the S.C. Executive Institute, the Certified Public Manager Program and Leadership South Carolina.

In addition, DHEC provides mentoring opportunities, training and in-service education for staff, and supports and encourages staff through Tuition Assistance and altered work time to take advantage of other formal and informal educational opportunities. The agency is integrating technology, content and distance learning methodologies to make learning more easily accessible and more cost effective for staff. Video conferencing, courses on video and CD-ROM, and Web-based training are currently available. The agency offers telecommuting, alternate work schedules and flex-time as non-monetary incentives for staff. The agency, working with the Office of Human Resources at the state Budget and Control Board, has developed a Reward and Recognition Program focusing on peer rewards.

- http://www.maph.unc.edu/
- http://www.sph.unc.edu/sephli/

IMPROVING THE DHEC ORGANIZATION

As the public health authority for the state, DHEC must report health and environmental status and outcomes. Monitoring these results, the "state of the state's health and environment" is part of the agency's legislative mandate. The agency uses numerous systems and processes to select and compare data and information based on programmatic and scientific need. Priorities include: access to and distribution of public health information and emergency health alerts; detection of emerging public health and environmental problems; monitoring the health of communities; supporting organizational capacity and quality; and analyzing data necessary for decision making.

Improving Information Systems to Guide Internal and External Decision Making

SIGIS Provides Support Systems

The Shared and Integrated Geographic Information System's (SIGIS) mission is to provide managers and policy-makers with decision support systems and applications that enable them to better analyze spatial information related to environmental and public health issues. The main objective is to develop and maintain the agency's Geographic Information System (GIS) infrastructure, including hardware, software, network and databases to provide spatial analysis capabilities as well as to interact with existing DHEC information management systems (such as the Environmental Facility Information System). The SIGIS program provides long-term and consistent support for DHEC staff and customers who need GIS and related services. These services include internal desktop applications, Intranet and Internet mapping capabilities, and a data server, which provide external users the ability to download GIS layers developed and maintained by DHEC. The program allows a better use of limited resources and minimizes redundancy across the agency. One example of a SIGIS-supported system is the use of the S.C. Community Assessment Network by DHEC's Childhood Lead Poisoning Prevention Program to determine the level and geographic patterns of childhood lead poisoning in South Carolina, which enhances the agency's ability to more effectively target high-risk areas for intervention and prevention education.

Electronic Disease Surveillance Enhanced

DHEC links to national data systems to ensure data quality and availability for decision making. The National Electronic Disease Surveillance System (NEDSS) is being implemented to better manage and enhance the large number of current surveillance systems and allow the public health community to respond more quickly to public health threats, including bioterrorism events. This system is allowing the agency to transition from a paper to an electronic system that will improve efficiency and effectiveness. When completed, NEDSS will electronically integrate and link a wide variety of surveillance activities and will allow for more accurate and timely reporting of disease information from health providers to the states and, ultimately, to and from CDC.

The Carolina's Health Electronic Surveillance System (CHESS) is South Carolina's implementation of the NEDSS-based system. CHESS is being used in all health districts for acute disease reporting. It has decreased the

time between receipt of a report and the start of an investigation. It has also increased the amount of data collected and the agency's analysis capabilities. The agency is also building the state's immunization registry, giving all providers statewide access to the immunization history of patients and the ability to update it as vaccinations are given.

DHEC, Maine Partner on EFIS Development

DHEC and Maine's Department of Environmental Protection (MDEP) signed an agreement in 2004 to share DHEC's Environmental Facility Information System (EFIS). EFIS integrates and manages information on regulated facilities, environmental permits, violations and enforcement actions to support state regulatory requirements. Both DHEC and MDEP expect to save between $100,000 and $300,000 per year by sharing development costs. The five-year pact benefits both states by serving as the framework for future additions and updates to EFIS. MDEP reviewed a variety of environmental information management systems and selected DHEC's EFIS as the best choice for MDEP. DHEC began developing and has been using the system since 1997.

Client-Based System Enhances Tracking

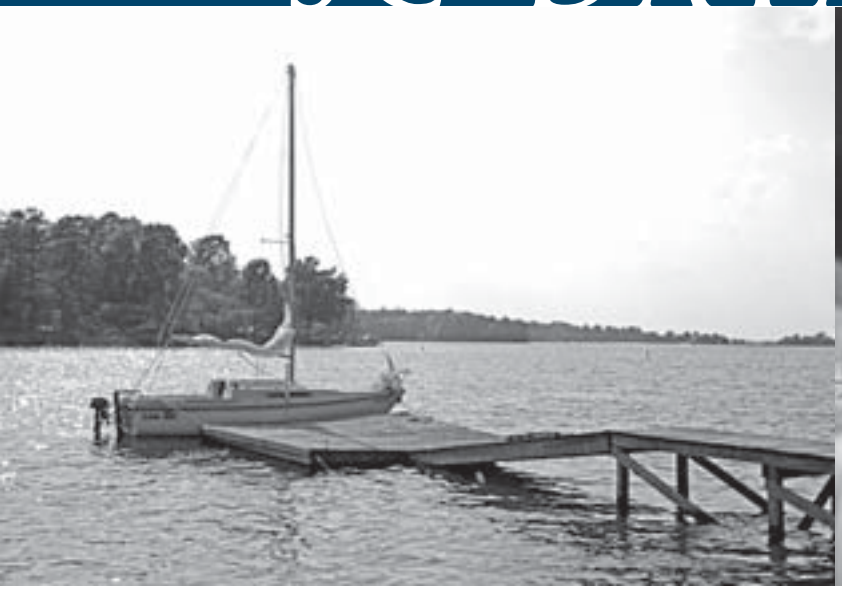
The Client Automated Record and Encounter System (CARES), a statewide public health information system, is being implemented by the agency and will assist with the care and tracking of clients across the state who receive services through any of the state's health departments. CARES will result in the merging of more than 60 separate databases that include more than 4.5 million patient records.

Ongoing Challenges, New Approaches

Fiscal Resources a Challenge

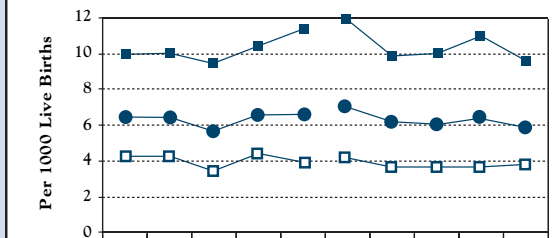
The agency continues to promote and protect the health of the public and the environment in the most effective and efficient manner while trying to maintain current levels of service and progress with reduced funding and reductions in staff. DHEC is working toward streamlining and restructuring the organization and continues to evaluate programs and services for efficiency and effectiveness. Although the agency has focused on reducing central administration before services, reductions to the agency's base budget make it difficult to maintain core performance efforts, diminish field presence, increase the time for response and decrease the agency's ability to support communities and citizens.

APPENDIX A
SC DATA



Collecting and analyzing data on health indicators allows South Carolina to detect trends, such as a rise in the numbers of disease or death occurring in a community that should be addressed through programs or interventions. Likewise, if a trend analysis shows improvement, it helps determine what is working. Appendix A: South Carolina Data continues the graphic presentation of trends that DHEC has been presenting in its annual reports since 1997. The data is presented by six age groups: pregnant women and infants; children birth to 14; teens; young adults ages 20-44; adults 45-64; and mature adults 65 and older. The health indicators presented are the leading causes of death or hospitalization in each age group or are other public health issues of emerging concern.

Neonatal* Death Rates By Race

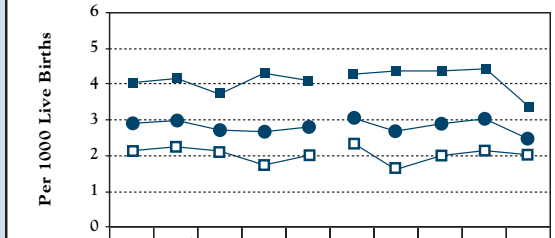


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	4.4	4.4	3.4	4.5	3.9	4.4	3.8	3.8	3.8	3.9
Black & Other	9.8	9.9	9.3	10.6	11.4	12.0	9.9	10.1	11.0	9.6
Total	6.5	6.4	5.6	6.7	6.7	7.2	6.1	6.0	6.4	5.9

*Neonatal deaths occur within the first 28 days of life.
Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

HP2010=2.9

Postneonatal* Death Rates By Race

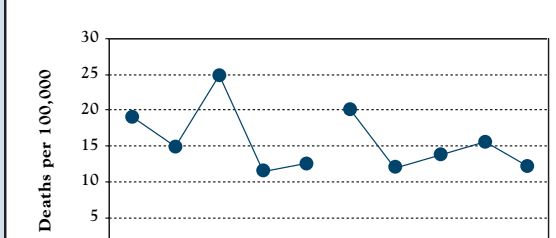


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	2.2	2.3	2.1	1.8	2.1	2.4	1.6	2.0	2.1	1.9
Black & Other	4	4.1	3.7	4.4	4.1	4.4	4.4	4.4	4.5	3.3
Total	2.9	3	2.7	2.7	2.8	3.1	2.6	2.9	3.0	2.4

*Postneonatal deaths occur from 28 days to 1 year of life
Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

HP2010=1.5

Child Accidents Death Rates Ages 1-4

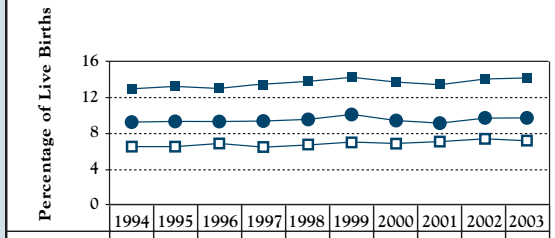


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total	19.4	14.9	25.5	11.3	12.3	20.7	11.8	14.0	15.5	12.2

Data Source: SC DHEC Biostatistics

Years 1999+ used ICD-10

Percentage of Low Birth Weight Infants (<2500 grams) By Race

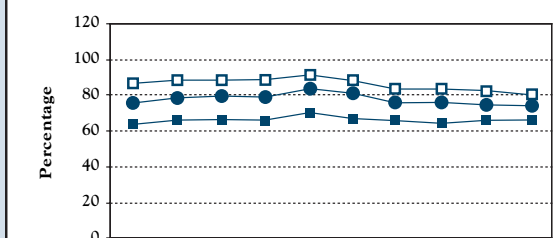


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	6.7	6.7	7.0	6.8	7.1	7.2	7.2	7.3	7.5	7.6
Black & Other	13.1	13.5	13.0	13.4	13.8	14.4	13.8	13.7	14.5	14.6
Total	9.2	9.3	9.2	9.2	9.6	9.9	9.7	9.6	10.0	10.1

Data Source: SC DHEC Biostatistics

HP2010=5.0

Percent Women Receiving Prenatal Care During First Trimester by Race

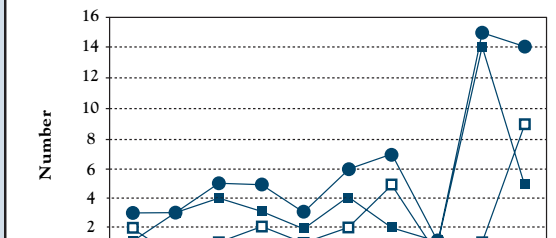


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	84.2	85.5	86.2	85.8	87.2	85	83.5	83.8	82	80.0
Black & Other	63.1	66.6	67.5	67	71.3	69.4	70.3	69.0	69.8	69.1
Total	76.1	78.5	79.3	78.9	81.4	79.4	78.6	78.5	77.7	76.2

Data Source: SC DHEC Biostatistics

HP2010=90%

Influenzae B (Invasive Infection) Cases

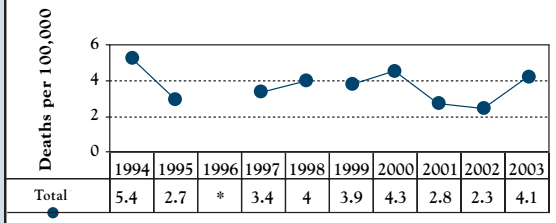


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Ages 0-4	2	0	1	2	1	2	5	0	1	9
All Others	1	3	4	3	2	4	2	1	14	5
Total	3	3	5	5	3	6	7	1	15	14

Data Source: SC Reportable Disease Surveillance System, SC DHEC

APPENDIX A
SC DATA

Child Homicide Rates Ages 1-4



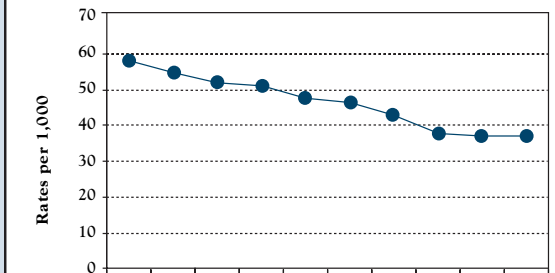
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total	5.4	2.7	*	3.4	4	3.9	4.3	2.8	2.3	4.1

* < 5 deaths

Data Source: SC DHEC Biostatistics

Years 1999+ used ICD-10

Teenage Pregnancy Rates Ages 15-17

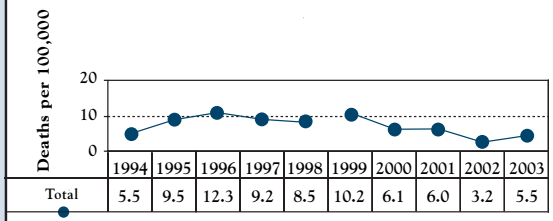


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total	59.0	55.5	53.0	52.1	48.5	46.5	43.2	38.6	38.2	38.2

Data Source: SC DHEC Biostatistics

HP2010=43

Teenage Suicide Rates Ages 15-19

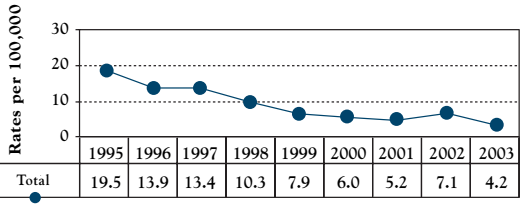


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total	5.5	9.5	12.3	9.2	8.5	10.2	6.1	6.0	3.2	5.5

Data Source: SC DHEC Biostatistics

Years 1999+ used ICD-10

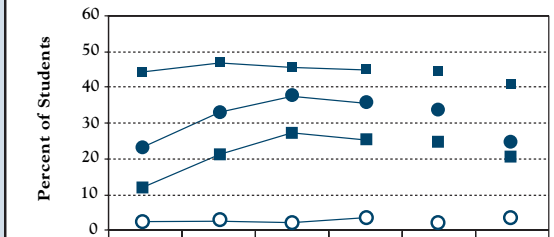
Children Hospitalized for Chickenpox Ages 0-4



	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total	19.5	13.9	13.4	10.3	7.9	6.0	5.2	7.1	4.2

Data Source: Hospital Discharge Survey, SC Budget & Control Board, Office of Research & Statistics

Substance Abuse Among High School Students

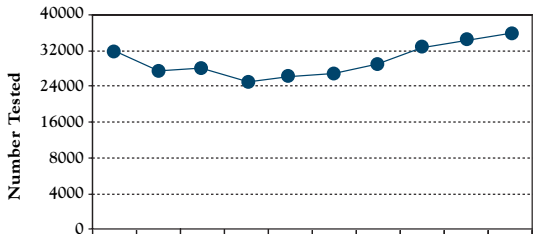


	1993	1995	1997	1999	2001	2003
Tobacco	23.0	32.6	38.6	36.0	33.0	25.8
Alcohol	44.3	46.4	45.3	45.4	44.0	40.6
Marijuana	12.5	20.8	26.5	24.5	23.9	21.8
Cocaine	2.2	3.0	2.4	3.5	2.7	3.5

Data Source: Youth Risk Behavior Survey, SCDOE
SC 2001 and 2003 are unweighted

HP2010
Marijuana = 0.7 Tobacco = 16

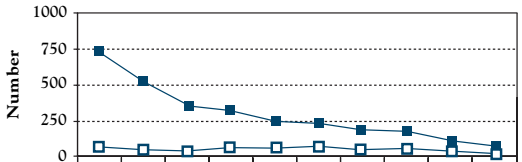
HIV Testing in DHEC Clinics Ages 20-44



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total	31,798	26,870	27,699	24,938	25,412	25,963	27,324	33,152	35,856	36,661

Data Source: Bureau of Laboratories, SC DHEC

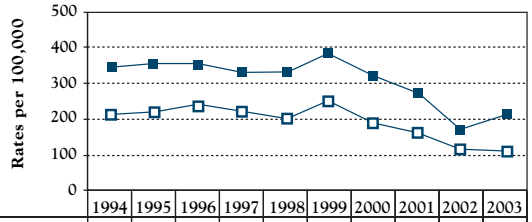
Infectious Syphilis All Ages



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	43	36	26	31	33	34	27	30	25	21
Black & Other	758	537	376	346	237	236	200	193	109	71

Data Source: SC Reportable Disease Surveillance System, SC DHEC

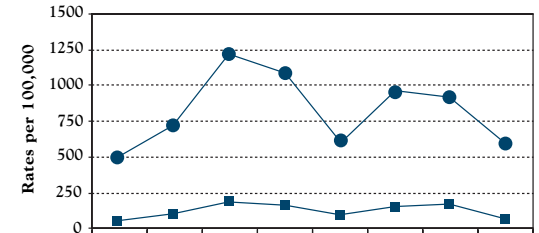
Pelvic Inflammatory Disease Rates All Ages



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	211	219	230	212	198	251	189	178.9	128.9	122.6
Black & Other	344	353	354	333	332	387	318	275.8	188.1	218.4

Data Source: Hospital Discharge Survey, SC Budget & Control Board, ORS

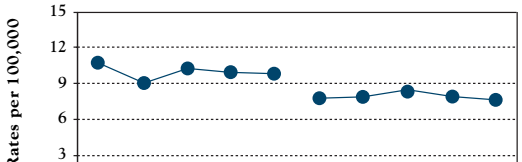
Chlamydia Genital Infection Rates Ages 20-44



	1996	1997	1998	1999	2000	2001	2002	2003
Female	499	713	1226	1078	639	944	916	610
Male	78	115	182	152	108	158	168	90

Data Source: SC Reportable Disease Surveillance System, SC DHEC

Age-Adjusted Homicide Rates All Ages

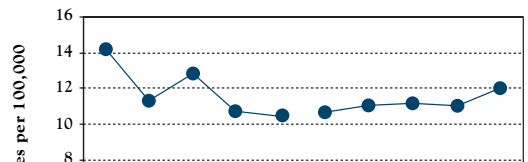


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total	10.8	8.9	10.3	9.7	9.6	7.9	8.0	8.6	8.0	7.8

Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

HP2010=3.2

Age-Adjusted Suicide Rates All Ages



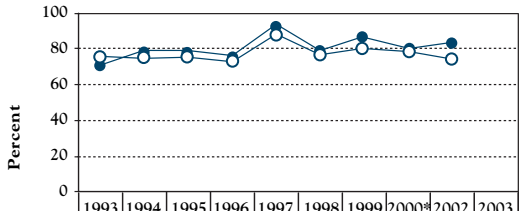
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total	14.2	11.5	12.8	10.8	10.6	10.7	11.1	11.6	11.2	12

Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

HP2010=6.0

APPENDIX A
SC DATA

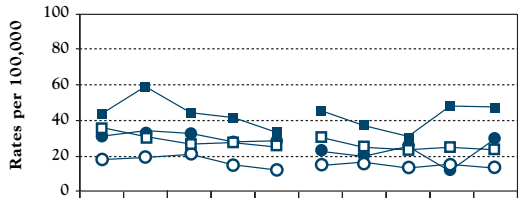
Prevalence of PAP Screening (past 3 years), Ages 45 and Older



	1993	1994	1995	1996	1997	1998	1999	2000*	2002	2003
White Female	76.3	76.5	81.4	79.7	88.0	76.12	79.9	82.2	75.2	NA
Black Female	71.4	78	78.5	76.1	92.6	75.77	85.5	80.0	83.1	NA

Data Source: Behavior Risk Factor Surveillance System, SC DHEC
*Question not asked on 2001 and 2003 BRFSS

Colorectal Cancer Death Rates Ages 45-64

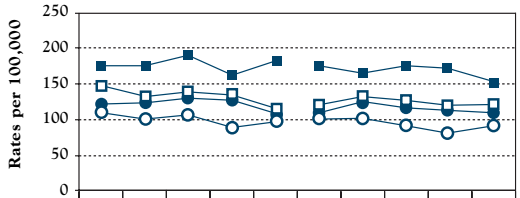


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Male	35.2	29.9	26.1	27.3	25.8	30.6	25.6	24.3	26.8	22.3
White Female	17.6	19	20.6	16.6	14.0	17.5	18.8	15.7	17.6	15
Black Male	42.4	59.5	45.1	42.0	30.4	45.6	38.5	29.8	49.0	46.4
Black Female	31.1	32.3	32.1	26.6	26.9	23.1	20.4	25.6	16.8	31.4

2003 Total Rate=23.6

Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

Colorectal Cancer Death Rates Ages 65 and Older

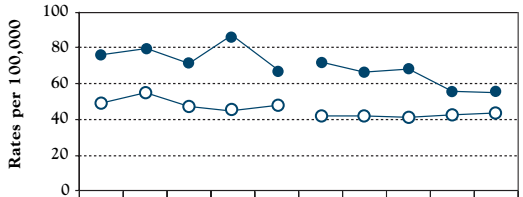


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Male	149.1	135.0	141.1	136.0	113.5	119.1	137.5	133.7	116.5	107.6
White Female	109.0	100.7	106.9	91.5	101.0	105.0	104.3	92.2	84.5	97.3
Black Male	180.2	177.7	193.0	161.0	186.5	178.2	165.0	176.4	173.0	150.2
Black Female	119.3	134.0	130.2	128.0	102.7	111.1	126.2	119.1	112.9	107.1

2003 Total Rate=106.1

Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

Breast Cancer Death Rates Ages 45-64

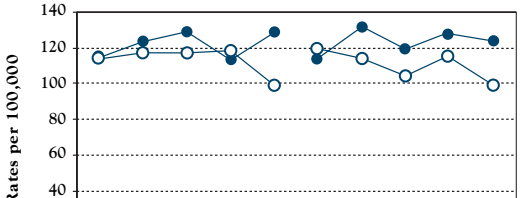


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Female	48.6	56.2	47.2	44.9	48.1	38.0	39.0	34.2	35.8	37.8
Black Female	76.7	80.2	69.8	84.3	65.5	71.7	65.0	66.8	54.6	54

2003 Total Rate=41.9

Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

Breast Cancer Death Rates Ages 65 and Older

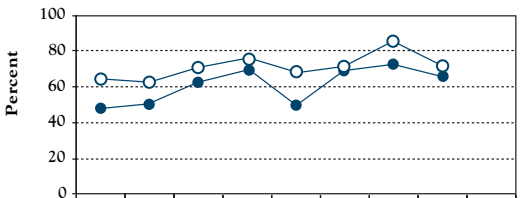


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Female	114	118	118	119	96.3	119.8	117.0	106.0	119.3	99.1
BlackFemale	116	123	131	113	129.6	112.6	133.9	120.7	127.6	121.5

2003 Total Rate=103.5

Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

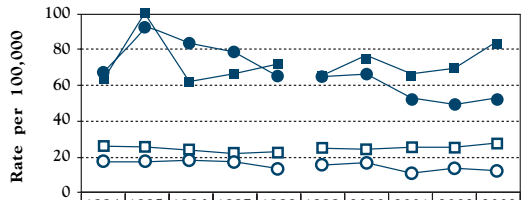
Mammogram & Clinical Breast Exam (past 2 years), Ages 45-64



	1993	1994	1995	1997	1998	1999	2000*	2002	2003
White Female	64.8	64.1	70.2	75.1	67.02	73.0	83.0	72.3	NA
Black Female	48.3	51.8	63.2	68.2	52.5	67	76.6	65.4	NA

Data Source: Behavior Risk Factor Surveillance System, SC DHEC
* Question not asked on 2001 and 2003 BRFSS

Diabetes Death Rates Ages 45-64

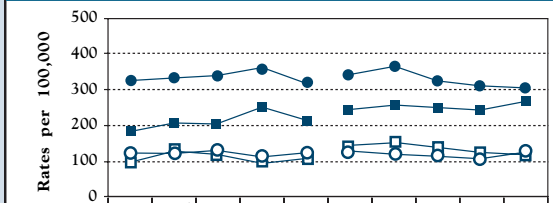


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Male	26.5	27.9	25.3	25.6	24.5	26.5	25.0	27.9	27.6	29.8
White Female	18	18.2	19.9	19.8	15.0	16.3	18.2	11.7	15.5	13.7
Black Male	65	101	63.4	67.4	73.4	64.4	74.2	64.3	69.3	82
Black Female	67.8	90.2	83.1	77.2	63.8	64.5	66.6	52.1	49.0	54.7

2003 Total Rate=33.4

Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

Diabetes Death Rates Ages 65 and Older

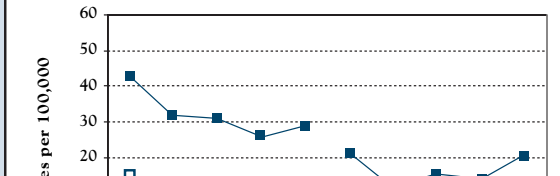


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Male	110.6	124.1	119.7	101.5	101.5	126.3	154.1	130.0	119.5	111.8
White Female	128.3	120.9	108.9	110.7	113.1	123.9	118.8	109.6	106.1	113.3
Black Male	188.3	210.1	206.5	253.4	217.5	253.1	268.2	255.6	249.7	283.2
Black Female	328.9	337.4	334.3	363.2	312.7	347.2	380.6	318.2	306.4	301

2003 Total Rate=151.6

Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

Prostate Cancer Death Rates, Ages 45-64



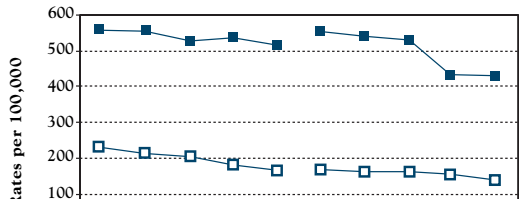
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Male	14.2	8.7	9.4	7.2	4.9	9.2	8.1	6.2	7.3	4.5
Black Male	42.4	31.2	31	26.5	29.3	20.8	12.2	16.8	15.2	21.5

2003 Total Rate=8.6

Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

HP2010=28.8 (all ages)

Prostate Cancer Death Rates Ages 65 and Older



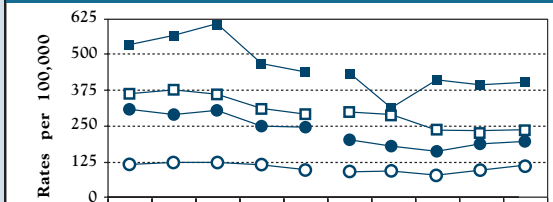
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Male	233.8	219.2	210.8	185.1	159.9	172.5	163.6	161.3	159.8	133.9
Black Male	564.8	557.5	530.9	551.6	515.4	568.1	541.5	526.6	425.2	421.1

2003 Total Rate=189.2

Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

HP2010=28.8 (all ages)

Heart Disease Death Rates Ages 45-64



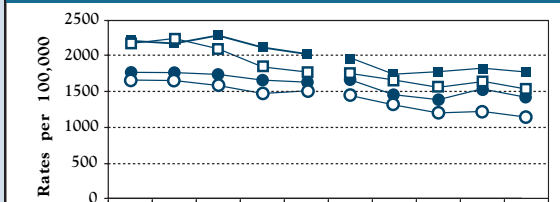
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Male	357.0	378.0	364.0	299.0	287.0	287.7	273.9	247.2	243.0	246.2
White Female	116.0	125.0	129.0	112.0	101.1	90.5	93.6	81.8	91.4	92.3
Black Male	532.0	570.0	603.0	461.0	432.8	430.3	338.2	412.5	386.5	391.7
Black Female	303.0	292.0	315.0	232.0	230.8	201.6	188.1	177.2	194.0	198.9

2003 Total Rate=197.7

Data Source: SC DHEC Biostatistics
Year 1999+ used ICD-10

HP2010=166 (all ages)

Heart Disease Death Rates Ages 65 and older



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Male	2070	2213	2084	1856	1790	1762	1685	1542	1623	1512
White Female	1646	1627	1595	1471	1490	1461	1348	1278	1290	1255
Black Male	2171	2114	2271	2104	2007	1906	1751	1790	1807	1749
Black Female	1730	1745	1748	1685	1623	1674	1468	1371	1509	1427

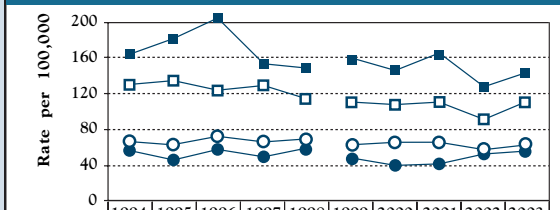
2003 Total Rate=1396.4

Data Source: SC DHEC Biostatistics
Year 1999+ used ICD-10

HP2010=166 (all ages)

APPENDIX A
SC DATA

Lung Cancer Death Rates Ages 45-65



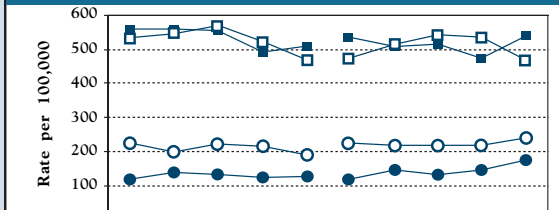
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Male	132.0	133.0	122.0	129.0	110.2	107.4	100.8	108.6	91.4	108.2
White Female	66.2	59.6	71.5	61.2	64.6	60.3	61.3	62.3	59.1	60.3
Black Male	160.0	179.0	202.0	153.0	148.6	156.7	145.6	162.0	126.0	140.8
Black Female	53.3	42.3	54.3	39.9	52.0	42.2	40.0	41.2	49.7	51.9

2003 Total Rate=84.9

Data Source: SC DHEC Biostatistics
Year 1999+ used ICD-10

HP2010=44.9 (all ages)

Lung Cancer Death Rates Ages 65 and Older



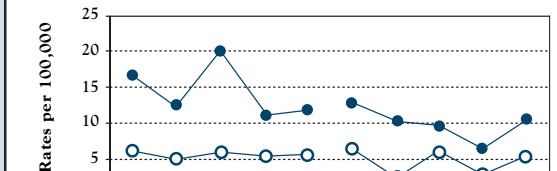
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Male	539.0	561.0	574.0	512.0	481.7	477.7	512.6	534.8	526.3	482.5
White Female	225.0	196.0	220.0	221.0	207.6	235.9	225.6	226.3	223.2	243.6
Black Male	565.0	568.0	558.0	517.0	512.8	544.9	508.0	513.8	477.1	527
Black Female	119.0	145.0	141.0	131.0	132.2	125.1	155.1	132.7	143.7	172.2

2003 Total Rate=333.8

Data Source: SC DHEC Biostatistics
Year 1999+ used ICD-10

HP2010=44.9 (all ages)

Cervical Cancer Death Rates Ages 45-64

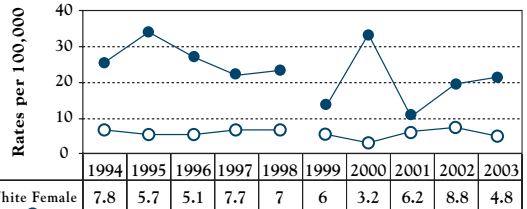


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Female	6.0	5.2	5.9	5.5	5.6	6.0	2.9	6.3	3.5	5.6
BlackFemale	16.7	12.2	19.9	11.5	11.7	12.0	10.2	9.3	6.3	10.3

2003 Total Rate=6.8

Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

Cervical Cancer Death Rates Ages 65 and Older

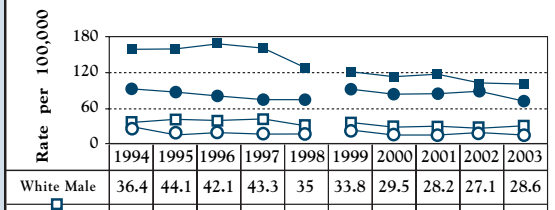


	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Female	7.8	5.7	5.1	7.7	7	6	3.2	6.2	8.8	4.8
BlackFemale	26.1	34.3	27.6	22.8	23.8	14.4	33.5	10.6	19.1	21.7

2003 Total Rate=8.6

Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

Stroke Death Rates Ages 45-64



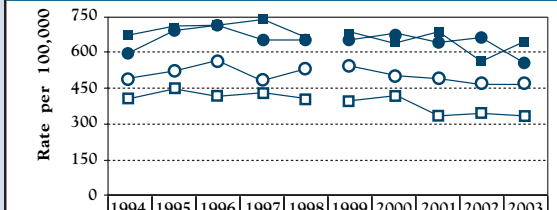
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Male	36.4	44.1	42.1	43.3	35	33.8	29.5	28.2	27.1	28.6
White Female	31.8	23.1	26.5	24.7	21.5	25.3	19.9	21.7	25.8	21.7
Black Male	157	157	172	157	121.6	114	99.6	109	88.0	88.6
Black Female	87.8	83.5	79.8	71	70.5	88.4	61.9	68.4	72.1	60.1

2003 Total Rate=37.5

Data Source: SC DHEC Biostatistics
Year 1999+ used ICD-10

HP2010=48 (all ages)

Stroke Death Rates Ages 65 and Older



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White Male	405.6	449.4	425.5	426.8	406.0	404.1	426.0	359.7	376.9	343.8
White Female	497.5	542.8	569.8	487.8	528.4	539.0	508.2	493.2	464.9	464.6
Black Male	634.8	692.1	737.3	741.6	663.0	692.1	642.1	705.6	556.2	628
Black Female	596.6	702.2	728	668.9	678.3	655.4	669.3	618.4	640.7	528.1

2003 Total Rate=444.8

Data Source: SC DHEC Biostatistics
Year 1999+ used ICD-10

HP2010=48 (all ages)

HEALTHY PEOPLE 2010

What is Healthy People 2010?

Throughout this report you have seen references to Healthy People 2010 objectives. These are the nation's health objectives for the first decade of the new century. These objectives are used by states, communities, organizations and others to develop health improvement programs. Healthy People 2010 builds on initiatives pursued over the past two decades. The 1979 Surgeon General's Report, "Healthy People," and "Healthy People 2000: National Health Promotion and Disease Prevention Objectives" both established national health objectives and served as the basis for the development of state and community plans.

Like its predecessors, Healthy People 2010 was developed through a broad consultation process, built on the best scientific knowledge and designed to measure programs over time.

Healthy People 2010 is designed to achieve two overarching goals:

Goal 1: Increase Quality and Years of Healthy Life

Goal 2: Eliminate Health Disparities

The first goal of Healthy People 2010 is to help individuals of all ages increase life expectancy and improve their quality of life. The second goal of Healthy People 2010 is to eliminate health disparities among different segments of the population.

Healthy People 2010 has a number of focus areas and 10 high priority areas for the nation's health. These priorities, the leading health indicators, are:

1. Physical Activity
2. Overweight and Obesity
3. Tobacco Use
4. Substance Abuse
5. Responsible Sexual Behavior
6. Mental Health
7. Injury and Violence
8. Environmental Quality
9. Immunization
10. Access to Health Care

South Carolina is committed to improving the health status in South Carolina by working toward the Healthy People 2010 goals and objectives.

APPENDIX B
HEALTHY PEOPLE 2010 OBJECTIVES



South Carolina uses Healthy People 2010 goals to measure progress toward health improvement. Each of the 10 Healthy People 2010 leading health indicators has one or more objectives associated with it. As a group, the leading health indicators reflect the major health concerns in the United States at the beginning of the 21st century. Indicators were selected based on their ability to motivate action, the availability of data to measure progress, and their importance as public health issues.

Healthy People 2010 Objective Numbers/Data Sources

01-01 Current Population Survey (CPS), U.S. Census Bureau, Bureau of Labor & Statistics
http://www.census.gov/

08-01a SC: DHEC Environmental Quality Control (EQC), Bureau of Environmental Services, Division of Air Quality Analysis
http://www.scdhec.gov/eqc

US: Aerometric Information Retrieval System (AIRS), EPA, OAR
http://www.epa.gov/air/data

14-24a SC and US: National Immunization Survey (NIS), CDC, NIP and NCHS
http://www.cdc.gov/nis

14-29a SC: DHEC Behavior Risk Factor Survey (BRFSS), Bureau of Epidemiology

14-29b http://www.scdhec.gov/datastat

US: Behavior Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP
http://www.cdc.gov/nccdphp/brfss

15-15a SC: DHEC Vital Records, Office of Public Health Statistics and Information Services

15-32 http://www.scdhec.gov/scan

16-06a US: National Vital Statistics System - Mortality (NVSS-M), CDC, NCHS
http://www.cdc.gov/nchs/nvss.htm

19-02 SC: DHEC Behavior Risk Factor Survey (BRFSS), Bureau of Epidemiology.
http://www.scdhec.gov/hs/epidata/state_reports.htm

US: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS
http://www.cdc.gov/nchs/nhanes.htm

SC: DHEC Behavior Risk Factor Survey (BRFSS), Bureau of Epidemiology
http://www.scdhec.gov/datastat

US: Behavior Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP
http://www.cdc.gov/brfss/

22-02 SC: DHEC Behavior Risk Factor Survey (BRFSS), Bureau of Epidemiology
http://www.scdhec.gov

US: Behavior Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP
http://www.cdc.gov/brfss

22-07 Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP

25-11 http://www.cdc.gov/nccdphp/dash/yrbs/index.htm

26-10a SC: Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP
http://www.cdc.gov/nccdphp/dash/yrbs/index.htm

US: National Household Survey on Drug Abuse (NHSDA), SAMHSA
http://www.samhsa.gov/

26-10c SC and US: National Household Survey on Drug Abuse (NHSDA), SAMHSA
http://www.samhsa.gov/

26-11c SC: DHEC Behavior Risk Factor Survey (BRFSS), Bureau of Epidemiology
http://www.scdhec.gov/datastat

US: Behavior Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP
http://www.cdc.gov/brfss

27-01a SC: DHEC Behavior Risk Factor Survey (BRFSS), Bureau of Epidemiology
http://www.scdhec.gov

US: National Health Interview Survey (NHIS), CDC, NCHS
http://www.cdc.gov/nchs/nhis.htm

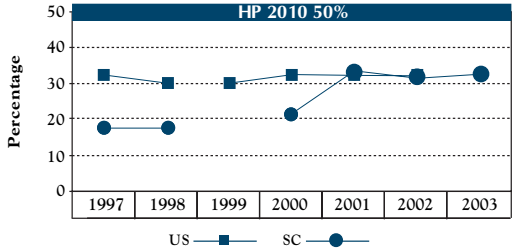
27-02b Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP
http://www.cdc.gov/nccdphp/dash/yrbs/index.htm

NA indicates data not available

www.healthypeople.gov

APPENDIX B
HEALTHY PEOPLE 2010 OBJECTIVES

Adult Participation in Regular Physical Activity, S.C. and U.S.



Data Source: SC BRFSS, US NHIS

*All respondents 18 and older who engage in 30 minutes of moderate physical activity 5 or more days a week or vigorous physical activity for 20 minutes per day, 3 or more days per week

Note: SC statistics do not include vigorous physical activity.

*SC Year 1999 and US 2003 Data Not Available.

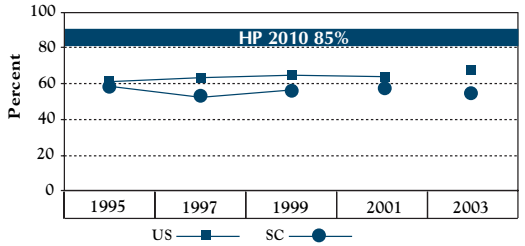
Physical Activity

22-02 Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day.

Adult Participation in Regular Physical Activity, SC by Race

Year	White %	Black %
1997	18.5	16.0
1998	18.5	16.0
1999	NA	NA
2000	22.7	21.8
2001	33.9	23.3
2002	35.4	20.4
2003	36.3	21.5

Adolescent Participation in Vigorous Physical Activity, S.C. and U.S.*



Data Source: YRBSS

*Adolescents in grades 9-12 who engage in 20 minutes of vigorous physical activity 3 or more days per week.

SC 2001, 2003 are unweighted

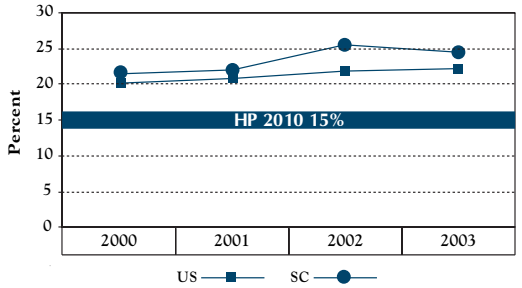
Physical Activity

22-07 Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardiorespiratory fitness 3 or more days per week for 20 or more minutes per occasion.

Adolescent Participation in Vigorous Physical Activity, SC by Race

Year	White %	Black %
1995	59.4	42.5
1996	NA	NA
1997	59.8	44.3
1998	NA	NA
1999	61.8	48.3
2000	NA	NA
2001	64.1	52.2
2002	63.8	46.4
2003	63.8	46.4

Obese Adults Age 18 and Older S.C. and U.S.*



Data Source: SC BRFSS, US NHANES

*Obesity defined as a BMI of 30^2 kg/m or more

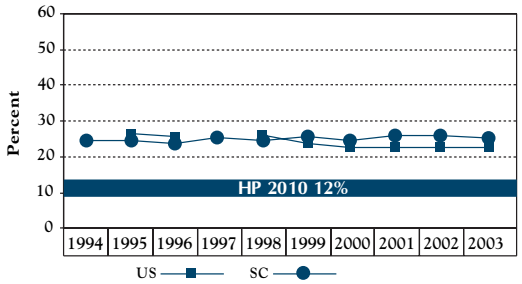
Overweight and Obesity

19-02 Reduce the proportion of adults who are obese.

Obese Adults, SC by Race

Year	White %	Black %
2000	18.1	33.6
2001	18.7	35.4
2002	21.5	36.9
2003	20.4	37.8

Current Cigarette Smoking * Among Adults, S.C. and U.S.



Data Source: SC BRFSS, US Age-adjusted NHIS

*Adults ages 18 years and older who smoked more than 100 cigarettes in their lifetime and smoked on some or all days in the past month.

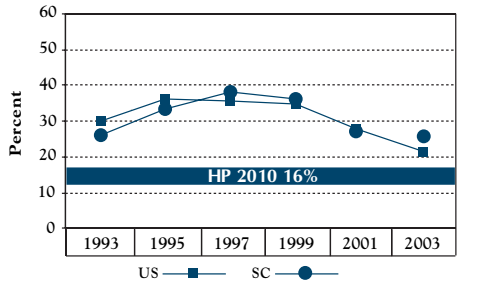
Tobacco Use

27-01a Reduce cigarette smoking by adults.

Cigarette Smoking Among Adults, SC by Race

Year	White %	Black %
1994	26	18.3
1995	25.5	19.8
1996	26.8	20.1
1997	24.9	19.4
1998	26.5	19.2
1999	25.5	18.3
2000	26.7	19.1
2001	26.7	23.7
2002	28.1	21.3
2003	25.2	24.9

Current Cigarette Smoking *Among Adolescents in Grades 9-12, S.C. and U.S.



Data Source: YRBSS

*Adolescents who smoked one or more cigarettes in the past 30 days.

SC 2001, 2003 are unweighted

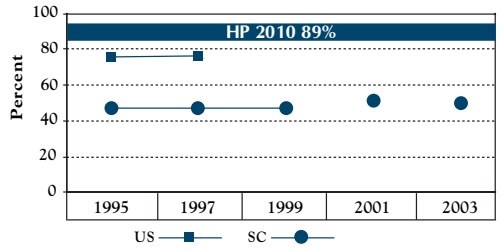
Tobacco Use

27-02b Reduce cigarette smoking by adolescents.

Cigarette Smoking Among Adolescents in Grades 9-12, SC by Race

Year	White %	Black %
1993	37.3	10.8
1994	NA	NA
1995	42.0	19.0
1996	NA	NA
1997	47.2	28.4
1998	NA	NA
1999	45.9	22.8
2000	NA	NA
2001	34.7	16.5
2002	NA	NA
2003	32.7	16.7

U.S. Alcohol & Drug-Free 12-17 Year Olds in Past 30 Days Compared to S.C. Public High School Students



Data Source: SC YRBSS, US SAMHSA

SC 2001, 2003 are unweighted

Substance Abuse

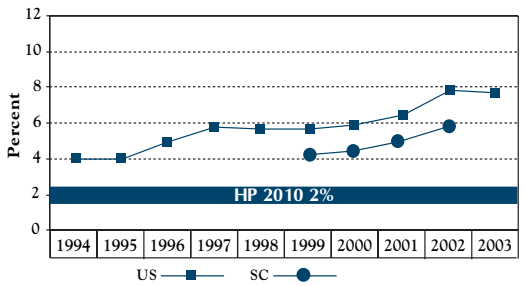
26-10a Increase the proportion of adolescents not using alcohol or any illicit drugs during the past 30 days.

Adolescents Aged 12-17 Years Who Reported No Use of Alcohol or Illicit Drugs in Past 30 Days, SC by Race

Year	White %	Black %
1995	42.6	51.7
1996	NA	NA
1997	42.6	51.1
1998	NA	NA
1999	41.3	53.9
2000	NA	NA
2001	48.2	56.3
2002	NA	NA
2003	46.6	55.7

APPENDIX B
HEALTHY PEOPLE 2010 OBJECTIVES

Proportion of Adults Using Illicit Drugs in Past 30 Days, S.C. and U.S.



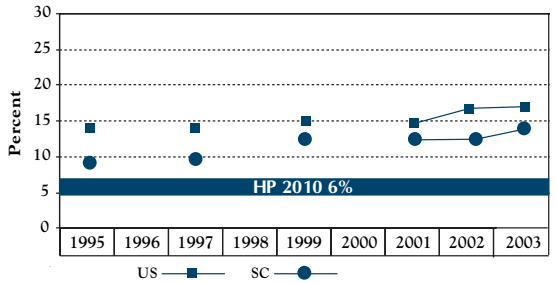
Data Source: SAMHSA, NHSDA

2003 SC Rate Not Available

Substance Abuse

26-10c Reduce the proportion of adults using illicit drugs during the past 30 days. South Carolina data by race not available.

Proportion of Adults Binge Drinking, S.C. and U.S.*



Data Source: BRFSS

*Adults aged 18 years and older who reported having 5 or more drinks on an occasion, one or more times in the past month.

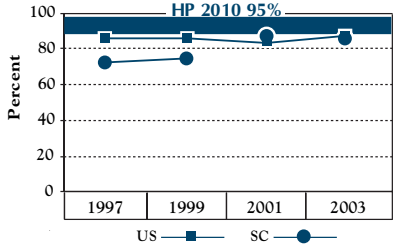
Substance Abuse

26-11c Reduce the proportion of adults engaging in binge drinking of alcoholic beverages during the past month.

Adults Who Reported Binge Drinking in Past 30 Days, SC by Race

Year	White %	Black %
1994	NA	NA
1995	9.8	7.8
1996	NA	NA
1997	11.2	13.4
1998	NA	NA
1999	13.4a	8.6
2000	NA	NA
2001	13.1	9.5
2002	14.1	7.5
2003	15.8	10.9

Adolescents in Grades 9-12 Who Are Not Sexually Active or Sexually Active and Used Condoms, S.C. and U.S.



Data Source: YRBSS

SC 2001, 2003 are unweighted

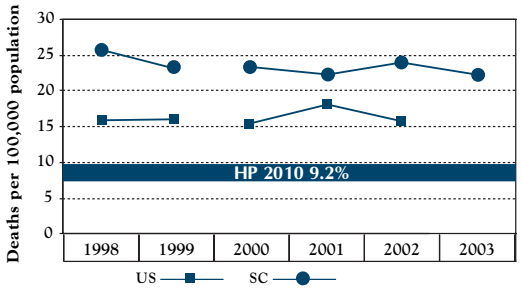
Responsible Sexual Behavior

25-11 Increase the proportion of adolescents who abstain from sexual intercourse or use condoms if currently sexually active.

Adolescents in Grades 9-12 Who Are Not Sexually Active or Sexually Active and Used Condoms, SC by Race

Year	White %	Black %
1997	79.6	70.4
1998	NA	NA
1999	80.6	72.8
2000	NA	NA
2001	86.5	85.9
2002	NA	NA
2003	87.2	85.2

Motor Vehicle Age-Adjusted Death Rates, S.C. and U.S.



Data Source: SC Vital Records, US NCHS

Years 1999+ used ICD-10

Injury and Violence

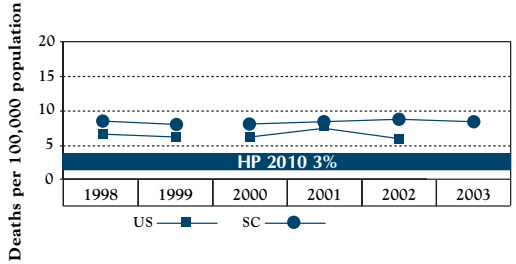
15-15a Reduce deaths caused by motor vehicles.

Motor Vehicle Age-Adjusted Mortality Rates (per 100,000), SC by Race

Year	White	Black & Other
1998	24.1	29.3
1999	21.2	30.2
2000	22.1	27.6
2001	22.3	25.8
2002	23.8	27.0
2003	22.9	23.6

Note: For 1998, cause of death classification based on ICD-9; for 1999, cause of death classification based on ICD-10.

Homicide Age-Adjusted Death Rates Among Adults, S.C. and U.S.



Data Source: SC Vital Records, US NCHS

Years 1999+ used ICD-10

Injury and Violence

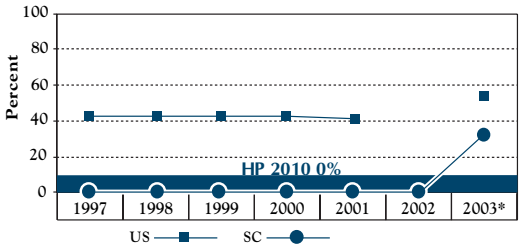
15-32 Reduce homicides.

Homicide Age-Adjusted Mortality Rates (per 100,000), SC by Race

Year	White	Black & Other
1998	5.1	16.5
1999	4.7	15.0
2000	5.1	14.4
2001	5.5	15.8
2002	5.0	14.3
2003	4.7	14.6

Note: For 1998, cause of death classification based on ICD-9; for 1999, cause of death classification based on ICD-10.

Persons Exposed to Ozone Above EPA Standard, S.C. and U.S.



Data Source: SC DHEC EQC, US EPA

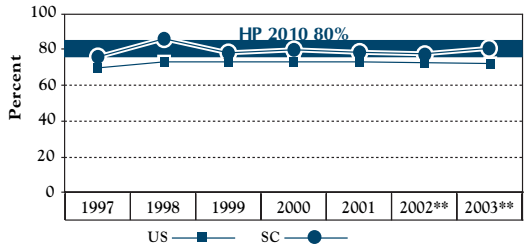
* EPA revised the national standard for ground-level ozone from a 0.12 ppm 1-hour "peak" standard to a 0.08 ppm 8-hour "average" standard

Environmental Quality

08-01a Reduce the proportion of persons exposed to air that does not meet the U.S. Environmental Protection Agency's health-based standards for ozone.

APPENDIX B
HEALTHY PEOPLE 2010 OBJECTIVES

Children Ages 19 to 35 Months Who Received all Recommended Vaccines, S.C. and U.S.*



Data Source: NIS

*4 DTaP, 3 polio, 1MMR, 3 Hib, 3 Hep B, 1 Varicella

**2002 and 2003 used Series 4:3:3:1:3:3:1

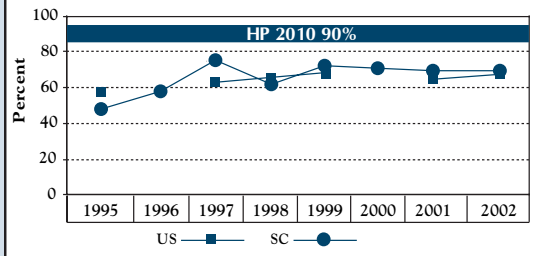
Immunization

14-24a Increase the proportion of young children who receive all vaccines that have been recommended for universal administration for at least 5 years.

Children Ages 19 to 35 Months Who Received all Recommended Vaccines, SC by Race

Year	White %	Black %
1997	70.1	80.3
1998	80.6	86.3
1999	81.4	73.2
2000	81.7	73.9
2001	81.9	78.3
2002	81.2	NA
2003	77.8	NA

Adults Ages 65 Years and Older Who Received Influenza Vaccine in the Past 12 Months, S.C. and U.S.



Data Source: SC BRFSS
U.S. data not given years 1996 and 2000

Immunization

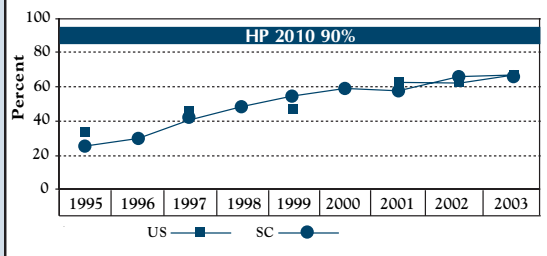
14-29a Increase the proportion of non-institutionalized adults 65 years and older who are vaccinated annually against influenza.

Adults Ages 65 Years and Older Who Received Influenza Vaccine in the Past 12 Months, SC by Race

Year	White %	Black %
1995	56.3	34.2
1996	59.4	53.3
1997	75.3	71.5
1998	67.4	44.5
1999	73.2	58.3
2000	72.3	61.9
2001	68.7	56.7*
2002	71.0	64.8
2003	73.5	58.3

*Interpret with caution: Cell size less than 50.

Adults Ages 65 Years and Older Who Ever Received Pneumococcal Vaccine, S.C. and U.S.



Data Source: SC BRFSS
U.S. data not given for years 1996, 1998 and 2000

Immunization

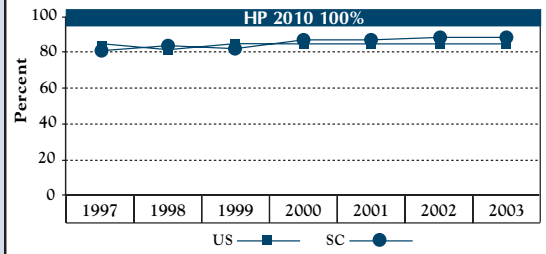
14-29b Increase the proportion of non-institutionalized adults 65 years old and older ever vaccinated against pneumococcal disease.

Adults Ages 65 Years and Older Who Ever Received Pneumococcal Vaccine, SC by Race

Year	White %	Black %
1995	30.8	13.0
1996	34.3	26.5
1997	47.0	19.1
1998	56.3	27.3
1999	61.0	38.9
2000	63.9	44.4
2001	63.7	31.4*
2002	67.6	54.2
2003	67.2	46.1

*Interpret with caution: Cell size less than 50.

Persons Under Age 65 with Health Care Coverage, S.C. and U.S.

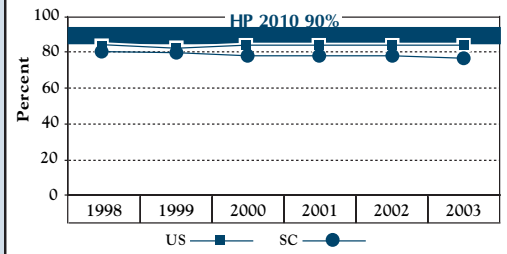


Data Source: CPS, US Census

Access to Health Care

01-01 Increase the proportion of persons with health insurance. South Carolina data by race not available.

Pregnant Women Who Began Prenatal Care in the First Trimester, S.C. and U.S.



Data Source: SC Vital Records, US NCHS

Access to Health Care

16-06a Increase the proportion of pregnant women who begin prenatal care in the first trimester of pregnancy.

Pregnant Women Who Began Prenatal Care in the First Trimester, SC by Race

Year	White %	Black %
1998	86.1	69.6
1999	85.0	69.4
2000	83.5	70.3
2001	83.8	69.0
2002	82.0	69.6
2003	80.0	69.0

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